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NAVIES AND NATIONS

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A Review of Naval Developments since the Great War

BY

HECTOR C. BYWATER

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PREFACE

In the following pages I have sought to exhibit the naval policies and problems of the post-war era in an impartial light. My experience as a writer on this subject has satisfied me, not only that it is one in which public interest is well sustained, but that a good deal of honest misunderstanding exists with regard to naval questions which have an important bearing on international relationships. Few people in this country, for example, seem to appreciate the motives of American naval policy, the active development of which has attracted so much attention in recent years. In the United States, also, there appears to be widespread misconception of British naval aims. These and other questions I have treated as frankly as possible, in the belief that candour is the surest antidote to misrepresentation.

For at least two years after the war there was a serious danger of Great Britain and the United States becoming rivals in the naval sphere. This contingency was averted by wise statesmanship in London and Washington, nor is it likely to recur if the Treaties negotiated at Washington in 1922 are observed in spirit as loyally as they have been observed in the letter. Nevertheless, certain naval issues are still outstanding, the settlement of which would do much to promote international harmony.

In dealing with the new base at Singapore I have thought it desirable to emphasise the political reactions of this project, which is commonly examined on its strategic merits alone. Nothing could be more mis-

leading than a study of the naval situation in the Far East which ignored the reorientation of Japanese policies since the Washington Conference.

The substance of the chapter on French naval development I wrote originally for *The Atlantic Monthly*, to the Editor of which, Mr. Ellery Sedgwick, I am indebted for permission to reproduce it in this volume.

When tracing the inception and growth of the Dominion sea forces I found Mr. H. C. Ferraby's work, *The Imperial British Navy*, a most useful and reliable guide.

All technical and other data concerning the various fleets have been carefully checked; the descriptions of ships are in many instances based on personal inspection.

Certain of the questions treated in these pages are necessarily of a controversial nature. I have endeavoured throughout to present clearly and without bias the relevant facts on both sides, so that the reader may judge for himself how far my conclusions are warranted by the evidence.

HECTOR C. BYWATER.

London,
January 1927.

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NAVIES AND NATIONS

CHAPTER I

FLEETS AND POLICIES

Among the agencies which contributed to the defeat of the Germanic coalition in the Great War, sea power has been awarded first place by a majority verdict of the historians on both sides. Naval force unsupported by land power would in all probability have been incapable of achieving victory; but although the two factors were interdependent, the peculiarly decisive effects of the former on the course of the war become more and more apparent as the events of 1914–18 are studied in true perspective. As a result, naval power is to-day appreciated at its full value in quarters where previously it had been underestimated. Even in Continental States where the time-honoured method of computing armed strength was to count up bayonets, the calculation is now extended to man-of-war tonnage.

France, for example, is devoting to her navy more attention than it had received for a decade before the war. The security of the Mediterranean sea routes under all circumstances is avowed as a principal aim of defence policy, for the furtherance of which a new fleet is being created. Italy, too, is developing her naval armament side by side with an imposing merchant marine. Germany, within the limits imposed by the Versailles Treaty, is maintaining a small

but efficient navy, so organised as to indicate a national belief that the Versailles Treaty restrictions may eventually be modified. That Russia, under her new rulers, has the will to reassert herself at sea is suggested by the periodical reports of a great ship-building programme, the execution of which is being delayed by inadequate technical resources.

Of the secondary States of Europe, Spain in recent years has spent so much money on her fleet that it has already regained the relative rank it held a quarter of a century since. Greece and Turkey appear to cherish maritime ambitions in excess of their current financial means. Poland is striving to acquire a navy strong enough to hold its own in territorial waters at least. Finland has ordered submarines and torpedo-craft. Esthonia and Latvia both possess small naval establishments. Jugo-Slavia is able to muster a fleet of thirty units all told. Further afield we see the United States occupying a place in the naval hierarchy far above that to which she aspired before the war. Over a wide area of the Pacific the fleet of Japan holds undisputed command. Look where we may, signs of naval activity are everywhere visible.

Nor is it a coincidence that warships should have played a prominent part in many of the outstanding political events of the post-war period, such as the Near Eastern crisis of 1922, the Græco-Italian dispute in 1923, and the Washington Conference. The present-day relations of Great Britain with the United States, Japan, and France, of France with Italy, and of the United States with Japan, are largely influenced, if not dominated, by the naval issue. Naval rivalry, it is true, was one of the root causes of Anglo-German discord, just as it had been responsible for many crucial phases of Anglo-French intercourse previous to the Entente Cordiale. But seldom if ever before has this particular element

acquired the universal significance in the political sphere that now attaches to it.

The reason is not far to seek. To belligerents and neutrals alike, the Great War demonstrated anew the vital importance of sea power. Germany, for all her military prowess, her extensive resources, and her talent for organisation, found herself hampered at every turn, and finally brought to subjection, by the irresistible pressure of sea blockade. Cut off from external markets, she had to subsist on a constantly dwindling stock of foodstuffs and essential materials, eked out by such exiguous supplies as could be obtained from her nearest neutral neighbours. For her, therefore, the war became at the outset a race against time. Only by a series of decisive military victories over her chief antagonists could she hope to be in a position to dictate peace before the worst effects of the blockade had made themselves felt.

We know now that this was her cardinal aim, just as we know also how nearly it was achieved in the first months of the conflict. But in the light of after knowledge it seems evident that in neglecting to make instant and vigorous use of the naval forces at her disposal she committed a fatal mistake. Whether the plan of a bold fleet offensive in the North Sea, as urged by Grand-Admiral von Tirpitz, would have had the results he anticipated, must always remain a matter of speculation; but in view of what happened at Jutland it is a fair inference that such heavy damage would have been inflicted on the British Fleet as to render the maintenance of an effectual blockade precarious, if not impracticable, and this at a most critical juncture of the struggle. Had Germany contrived to keep her oversea communications even moderately secure, she would have stood an excellent chance of winning the war. Her foes had reason to bless those German statesmen who saw fit to treat the High Sea Fleet as a political pawn, rather than as

their sharpest weapon of war, and whose influence kept it inactive in harbour at the moment when a vigorous naval thrust might have done mortal injury to the Allied cause.

In France there had been no adequate naval preparation for war with Germany. The French fleet in 1914, though formidable on paper, was hopelessly outmatched by the German. The Northern squadron charged with the defence of the Channel consisted of a few obsolete cruisers, which the German battle-cruisers could have blown out of the water. With the Mediterranean squadron there were some powerful battleships, but not a single vessel sufficiently fast and well armed to deal with the Goeben. Had the French Navy been called upon to fight single-handed, it would, of course, have made a gallant stand, but the end would never for an instant have been in doubt.

The very regularity with which troops and war material from overseas poured into France throughout the war may explain the indifference that was shown to the agency by which this constant stream of nourishment was maintained. French war historians, with hardly an exception, ignore the influence of sea power, and until lately this seemed to be true of French soldiers. Marshal Foch, it is said, was asked at an Armistice celebration what the French navy had done towards winning the war. "The navy?" he replied. "Oh, it gave us three divisions." We shall see, however, that French military opinion has since come to appreciate the importance of a strong fleet, not only with regard to the general scheme of national defence, but as a direct and essential support to the army.

Italy showed from the first a clearer perception of the amphibious nature of the war. Her naval policy for many years had been guided by sound and definite principles. The immediate object was to assure the

command of the Adriatic, for Italy, despite her long partnership in the Triple Alliance, never took her eyes off the Austro-Hungarian fleet, nor failed to maintain a substantial margin of superiority. This margin was necessary in view of the severe handicap imposed by a singularly unfavourable maritime frontier. Since warfare afloat, as on land, is an affair of positions, Italy was at a grave disadvantage as against her prospective enemy, for she had to provide for the defence of a four-hundred-mile seaboard which had many towns but scarcely any good harbours, and was within easy reach of Austrian naval forces issuing from the numerous deep-water refuges of the Dalmatian coast.

Now that her strategic embarrassments in the Adriatic have been eliminated, she is free to devote attention to a second and still more difficult naval problem: how to secure the safety of her sea communications, particularly in the Eastern Mediterranean. An extreme poverty in mineral resources compels her to depend on seaborne supplies to a greater degree, perhaps, than any other industrial community in Europe. Were these supplies to fail, nothing could save her from complete economic paralysis.

It may be observed in passing that there is too marked a tendency in Great Britain to treat all questions of naval defence as if they concerned this country alone. It is by no means rare to hear British advocates of sea power dwelling upon the need of a supreme navy to defend the territories and the trade of our Empire, and almost in the same breath rebuking other Powers for presuming to build warships. Nevertheless, to a patriotic Japanese, let us say, adequate naval strength may seem as indispensable as it does to ourselves, and for precisely the same reasons. When the new Navy Bill—which related chiefly to the defence of the Dutch East Indies—was before

the Netherlands Parliament in 1924, speaker after speaker on the Government side predicted the ultimate ruin of the kingdom if the measure were defeated, nor could any other logical conclusion be drawn from the arguments presented.

That Germany's vaulting naval ambitions made the Great War inevitable is a fact acknowledged almost everywhere save in Germany, yet there was a good deal to be said for the thesis by which Herr von Tirpitz justified his successive battleship programmes. Germany, he contended, had a vast and expanding overseas trade, which must necessarily exist on sufferance until she possessed a fleet strong enough to defend it against rivals whose commercial jealousy might sooner or later tempt them to eliminate this irksome competitor by violent means. Security was to be attained by building a German fleet, not necessarily as powerful as the premier fleet, but just powerful enough to deter the premier fleet from risking a trial of strength, especially as the latter would not, by reason of its world-wide commitments, be able to muster its full strength in the main fighting zone. This so-called " Risiko-Gedanke " was, nominally at least, the bedrock of German naval policy before the war. Experience proved it to be fallacious, yet it was plausible enough to convince millions of hard-headed men in Germany. The flaw in the argument was the assumption that Great Britain would remain passive while her naval supremacy was being gradually undermined. As we know, she took counter-measures which defeated the German purpose.

All through the period of intensive shipbuilding competition, from 1904 to 1914, the British Navy kept its lead, and was strong enough in the end to confront Germany with an overwhelming array of force in the decisive war zone. Thus the " Risiko-Gedanke " proved chimerical. That the controllers of German policy ever believed in it themselves may

be doubted. It suited their ends to represent the new fleet as having been created for the protection of German trade, and not as the instrument of aggressive imperialism which it speedily became.

It is, of course, almost impossible to discriminate between the major navies of the world so far as their defensive and offensive character is concerned. To other nations the British Navy, with its squadrons and bases scattered over the Seven Seas, may appear to be essentially an arm of offence, yet by the British people its defensive nature is always taken for granted. Japan, as an island empire whose existence depends upon her ability to control the north-west Pacific, must perforce maintain a navy of considerable strength. Its sphere of influence is strictly limited to this corner of the Pacific, beyond which it has no bases. Nevertheless, there are critics who regard the Japanese Navy as a menace to foreign territories which lie far outside the cruising radius of its largest ships. This reasoning is difficult to follow. It is a demonstrable fact that Japan is unable to bring her naval strength to bear at any point remote from her own waters, and is thus entitled to claim a strictly defensive *raison d'être* for her fleet.

To describe the United States Navy, with its numerous ports on the Atlantic and Pacific coasts and its insular bases at Hawaii, Samoa, Guam, and Manila, as a navy for local defence, may seem absurd until the facts are considered. Were the United States at war with a powerful European foe, it could not despatch a fleet to European waters, because no base would be available there. Were the enemy an Asiatic Power, the fleet would be equally incapable of taking the offensive, and for the same reason. It is true that Asiatic bases exist at Manila and Guam, but these, being weakly defended, would probably have passed under the enemy's control before the fleet could arrive. In effect, therefore, the United States

Navy is tied to its own waters. As a condition precedent to oversea war operations, one or more fleet bases within striking distance of the enemy would have to be seized, developed, and held, and it is exceedingly doubtful whether the United States Navy is now, or will be in future, strong enough to undertake this formidable task.

Turning back to Europe we find the naval forces of France being augmented. Here, too, the avowed object is defence, not aggression. France has so far departed from her traditional naval policy that she no longer attaches prime importance to the battle fleet. Her new navy is composed chiefly of fast cruisers, well-armed and seaworthy torpedo vessels, and submarines. The first mission of these light flotillas, supported by powerful air squadrons, is to keep the route between France and her African colonies free from interference by enemy naval forces, whether consisting of capital ships or smaller craft. This plan obviously presupposes war with a Continental Power—a war, that is, in which the strength of the French army would be the determining factor. Hence the elaborate measures that are being taken to safeguard the sea lanes along which troop convoys from Northern Africa must travel to France. It cannot be denied, however, that many units of the new French Navy, such as the fast cruisers and large submarines, are ocean-going ships, and could thus wage war in regions far removed from the Mediterranean. And so, while the assurances of France respecting the defensive and local *métier* of her present fleet may be accepted without question, her shipbuilding programme is necessarily a matter of interest to all other Naval States, not excepting those which have no direct concern with the balance of power in the Mediterranean.

British naval policy has been modified as a result of the Great War and its economic and diplomatic

sequelæ. Great Britain has relinquished, more or less voluntarily, the absolute supremacy afloat which had been hers for upwards of a hundred years, and for the first time in history has agreed to a ratio of battleship strength which reduces her to equality with a foreign State. This surely is no mean sacrifice, considering the immensity of her Empire, the magnitude of her stake in seaborne trade, and, last but not least, the prestige she had enjoyed for a century as the supreme naval Power. But an examination of the losses and gains resulting from this concession must be reserved for a later chapter.

Apart from the collapse of German sea power, Britain's naval burden has been lightened in some degree by the development of aviation, which bids fair to relieve the Navy of prime responsibility for home defence. While experts had always differed as to the chances of an invasion of this country, few held it to be absolutely impracticable. It was therefore a possibility to be reckoned with, and one that continued to influence our naval strategy down to a very recent date. But with the coming of air power the difficulties of invasion have increased so greatly as to render the operation virtually impossible. Submarines alone, in adequate numbers, could probably prevent the landing of a hostile military force: submarines and aircraft together should give complete immunity from invasion.

Aviation, however, has not been an unmixed blessing for Great Britain. The precise degree to which it has already affected her naval power cannot yet be determined, but that the new weapon will have an adverse influence on that power admits of no doubt. As aeroplanes increase in range and armament, so must the British Navy's freedom of movement, alike in home waters and in narrow seas abroad, inevitably suffer constraint. During the last war, when aircraft were comparatively limited in

range and offensive power, the British east coast bases of Chatham, Sheerness, and Dover were frequently subjected to heavy bombardment from the air. Had the enemy possessed numerous aircraft of present-day types, these bases would probably have become untenable. Of the two principal home dockyards, Portsmouth is 72 miles and Devonport 110 miles from the French coast. Both, therefore, lie within easy range of air attack. Nor is Rosyth beyond the radius of modern machines flying from Germany. Many naval officers openly question the possibility of keeping a fleet in the North Sea or the Channel in the event of war with a Continental Power strong in aircraft. If their apprehensions are well-founded, it is evident that the position of a British fleet in the Mediterranean in wartime would be still more precarious.

It is too early to judge whether air power is destined to negative the principles of naval strategy as now understood, but that they will have to be readjusted to meet the new conditions which have arisen is certain. It seems clear that any nation possessing a weak navy but a strong air force will be able to dominate a wide section of the surrounding sea, and hence to afford reasonable security to marine routes within the sphere of its air control. This is a matter of capital importance to countries such as France and Italy, each of which has comparatively proximate sources of supply in case of emergency, the former in Africa and the latter in the Near East. But to Britain herself, separated as she is from indispensable markets by the width of oceans, the limited sea command which aircraft are capable of exercising offers no marked advantage. Less than one-third of the wheat annually consumed in Great Britain is home-grown. Of the remaining two-thirds the bulk is imported from five oversea countries—the United States, Canada, South America, India, and Australasia,

the average distance travelled by each consignment being about 6,000 miles.

It is difficult for communities which are more or less self-supporting to appreciate the utter dependence of the inhabitants of Great Britain on sea transport. This dependence is but dimly conceived by the people themselves, and perhaps providentially so, since otherwise they might not have endured so calmly the dread ordeal of the German submarine campaign. But they are sufficiently conscious of it to give instinctive support to the Navy as the guardian of sea trade. In most countries naval enthusiasm has to be fanned by artificial means, by appeals to Chauvinism, by threats of foreign aggression, or by promises of increased prosperity. In Great Britain all these devices have been employed at times with more or less effect, but the strongest lever is, and has ever been, the nation's faith as embodied in that striking sentence from the " Articles of War," which declares it to be " the Navy, whereon, under the good providence of God, the wealth, safety, and strength of the Kingdom chiefly depend." Until that faith is shown to be misplaced, the British people will continue to insist on the maintenance of a powerful Navy, be the cost what it may.

Our national view of the Navy as an institution that exists solely for defence is not always shared by other peoples. From time to time foreign critics have hotly denounced our claim to control so wide an area of the navigable globe, holding this naval hegemony to be inconsistent with the liberties of mankind at large. Germany, of course, made the most of this argument, even endeavouring to give her ruthless submarine warfare the character of a crusade for the freedom of the sea. During the Great War our blockade policy created much ill-feeling in neutral countries, and not least in the United States, where it continued to be a source of irritation until

that country in turn became a belligerent. Doubtless the knowledge that every war in which Great Britain is engaged inevitably brings irksome restrictions upon maritime trade and sea transport in general accounts for the coolness with which foreign opinion receives our assurances as to the pacific aims of British naval policy. To nations whose prosperity is bound up with sea trade "navalism" may seem no less sinister a thing than "militarism" appears to us.

The true reason for the popularity of the submarine abroad is a belief in its efficacy as a check to navalism. This confidence may be misplaced, but so long as it exists there will be no prospect of securing the abolition of the submarine by international consent. Countries not rich enough to maintain battle fleets are the more determined never to relinquish a weapon which represents their only means of defence against naval aggression. Owing to the prodigious increase in the size and cost of surface warships during the present century, only the wealthiest States are now in a position to support navies of any considerable power. As a consequence, the relative value of the coast-service fleets of the smaller European Powers has declined almost to zero point. To countries such as Sweden, Denmark, Norway, and the Netherlands, the problem of sea defence may well seem insoluble. In the pre-Dreadnought era they built armoured ships of modest tonnage, which, although much inferior to the standard battleships of the period, were yet capable of proving formidable antagonists in their own waters. But in the present age of monster ships and guns the fighting value of these miniature ironclads is almost negligible, and the money spent upon their upkeep practically wasted. Their retention is probably due to national pride, rather than to any faith in their practical utility.

Denmark, indeed, has seriously contemplated the

reduction of her navy to a mere patrol flotilla, though she continues to build submarines. Holland still finds it expedient to maintain a surface fleet, less for home defence—which has been relegated to submarines and minelayers—than for the protection of her colonial territories, which are essential to her economic existence. It is fully recognised that the squadron stationed in the East Indies is not strong enough to resist attack by a major fleet. Its mission, however, is to keep the prospective foe at bay until the arrival of the help that Holland believes would be forthcoming from a powerful ally, were Java or Sumatra to be menaced.

The motives which have led Spain to devote so much attention to the development of her navy in recent years are less easy to divine. For ten years after the American war she made no attempt to rehabilitate her shattered sea power. Then early in 1908 a new programme was framed and duly carried out, thanks in some measure to British capital and technical supervision. The Spanish Navy to-day, so far as material is concerned, ranks as fourth in European waters and is still growing.

Its ships performed useful service in the Riff campaign, but the fine cruisers, flotilla leaders, and submarines now under construction were obviously not designed with a view to patrol work in Moroccan waters. Like certain other States not of the first rank, Spain appears to be anxious to cultivate close relations with a powerful neighbour, under whose ægis she looks forward to enjoying a larger share in the direction of world affairs than she could claim on her own merits. That her value as an ally, particularly of a great Mediterranean Power, will increase in proportion to the growth of her naval strength is self-evident, and in this circumstance we may find the clue to the energy with which she is building up her fleet.

The influence of the economic factor in regulating the dimensions of modern naval armaments can scarcely be exaggerated. H.M.S. Hood, the first capital ship to be completed for the Royal Navy after the war, cost £6,025,000 to build and equip. The later battleships, Nelson and Rodney, have cost approximately £7,000,000 each. The Tiger, a battle-cruiser, completed in 1914, represented an expenditure of £2,087,490, while the Queen Elizabeth, a contemporary battleship, cost just over £3,000,000. By studying these two sets of figures an idea is gained of the abnormal increase in man-of-war costs during the past ten years. Equally striking is the difference in price between the fighting ships of 1904 and those of 1914. The bill for the battleship Britannia, launched in 1904, was £1,500,000; the Prince of Wales, commissioned the same year, just exceeded £1,000,000. Battle-cruisers had not then been evolved, but armoured cruisers could be built for £850,000 to £1,000,000. Thus within a period of little more than twenty years the cost of capital ships has undergone a five to six-fold increase.

The price of smaller craft has also risen, if not in corresponding measure. Protected cruisers of the " Chatham " class, built in 1912–13, and regarded as powerful ships in their day, averaged £334,000. Their smaller successors of the " D " class, the last of which entered service in 1922, cost about £800,000 each. The Enterprise, a larger ship, absorbed £1,690,000; though in her case, as in that of the Effingham (£2,175,000), the high cost was due in part to slowness of construction. Cruisers of the 10,000-ton " Treaty " type, now standardised in all the major navies, cost in this country nearly £2,000,000. For similar vessels under construction in the United States the official estimate is no less than £3,300,000 per ship. Before the war a destroyer could be built for £125,000, as against the present average of

£250,000. Submarine values have soared from £80,000 in 1914 to £400,000 in 1927. Warships of extraordinary design often run to fabulous prices : *e.g.* the large British submarine X-1, upon which £1,000,000 has been spent ; the aircraft-carrier Furious, the cost of which has been increased by alterations to £5,000,000; and the United States aircraft-carriers Lexington and Saratoga, officially priced at £9,000,000 each.

Nor is first cost the only item which has to be considered. Since 1914 every part of a warship's equipment, including shells and torpedoes, has doubled or trebled in price. Once a ship has been completed the charge for maintaining her in commission becomes a permanent burden. For H.M.S. Hood, the largest warship in existence, the annual cost of maintenance is £540,000; for each battleship of the "Nelson" class, £432,960; for every cruiser of the "County" type, £238,850; for each new destroyer and submarine, £47,000 and £38,000 respectively. On the basis of official statistics, the current British naval programme, comprising 2 battleships, 21 cruisers, 27 destroyers, and 24 submarines, represents an initial outlay of £70,000,000. The yearly bill for keeping these vessels in commission amounts to £7,818,500, so that in nine years the maintenance charges will have exceeded the first cost.

Figures such as the foregoing serve to explain the hesitation with which even the wealthiest Powers now embark on new shipbuilding programmes. For the lesser States the cost of naval armament, on however small a scale, has become well-nigh prohibitive. So long as fleets are organised on the present system, there is no possibility of a reduction in the financial burden they entail. On the contrary, there is every prospect of a further increase. Capital ships, it is true, are restricted by Treaty to 35,000 tons, a limit that should keep the cost average at a

figure between £7,000,000 and £9,000,000, provided that new and expensive equipment is not embodied in future designs. But if the Treaty has arrested the development of the capital unit, it has fostered that of ancillary warships by prescribing a standard of tonnage considerably in excess of the normal pre-Treaty figure. With rare exceptions, future cruisers will be of the 10,000-ton type, and therefore cannot be built for much less than £2,000,000. Since the same tonnage limit applies indiscriminately to all non-capital vessels, a competitive spirit is already making itself felt in the design of destroyers and submarines. In the former category, France has set the pace by building flotilla leaders of 2700 tons; in the latter, Great Britain has produced a submarine of 2525 tons, soon to be surpassed by rivals of 3000 tons now building in the United States, in France, and possibly in Japan also.

Upon reflection the futility of this competition becomes manifest. Such gain in relative strength as may accrue from the possession of a fighting ship more powerful than any other is sooner or later cancelled by the building abroad of ships of equal or superior power. This has occurred so often in the past that the vanity, nay, the absurdity of the whole procedure should be clear to all. Yet the leading navies still strive to outdo one another in ship dimensions. Having passed successively through the pre-Dreadnought, the Dreadnought, and the super-Dreadnought stages, they have now compromised by agreeing, for a term of years, not to go above 35,000 tons, which incidentally is twice the tonnage of the original Dreadnought. But for the satellites of the Dreadnought they have established the liberal standard of 10,000 tons, which means that no nation would put itself in the wrong if it decided to build submarines six times larger than the largest submarine afloat at the end of the Great War. And if the present

rate of progress is sustained, submersible warships of 10,000 tons may be at sea before many years are past.

Whenever problems affecting the strength of the Navy arise, the public is always enjoined to leave the solution to the naval authorities, who alone are competent to deal with such matters. It is perhaps as well for the naval authorities that popular interest does not extend to technical details. If it did, a review of shipbuilding policy during the last twenty-five years would lead to embarrassing questions. One effect of the exorbitant cost of modern naval armament has been to arouse in the taxpayer a keener curiosity as to the expenditure of the funds he has to provide for defence. This curiosity, though a new phenomenon in Great Britain, has always been manifested in other countries. Naval discussions in the United States Congress and the French Chambers are far more comprehensive and trenchant than similar debates in the British Parliament. The American and French naval representatives have to explain and justify every item in their respective budgets, which seldom escape ruthless pruning at the hands of the legislators. In Germany, too, the Reichstag used to keep a vigilant eye on naval expenditure, and even the persuasive eloquence of Herr von Tirpitz could not always save his budget from drastic reduction. In Great Britain, however, it is extremely rare for the Navy Estimates to undergo modification during their passage through Parliament. While this complaisant attitude on the part of the legislative body undoubtedly simplifies the task of naval administration and enables a consistent policy to be pursued, it confers upon the Admiralty a freedom with regard to expenditure which, as we shall see later, is not always vindicated by results.

In France and other countries which shrink from the burden of battleship fleets there is a popular

belief that sea defence by means of light craft and submarines is relatively cheap. This is a delusion. France has found it expedient, for reasons of seaworthiness and endurance, to give her new "mosquito" craft the dimensions of ocean-going vessels. Her latest destroyers are almost as large as light cruisers, and hardly less expensive to maintain. Her submarines exhibit a progressive increase in tonnage. French opinion is waking to the fact that the new method of naval defence is but little cheaper than the old. Since the publication of figures relating to submarine building costs, less has been heard of the demand put forward by M. de Kerguézec, and supported by the Press, that France should render her maritime frontiers secure by creating a fleet of 250 submarines. It has been proved that the construction and maintenance of such a fleet would impose a prohibitive charge on the nation's purse.

While there is no reason to question the thesis that submarines offer a better investment than capital ships to a State which can only afford a small navy, it would be a complete mistake to assume that the mere possession of submarines is a guarantee against aggression. The spectacular exploits of individual submarines in the Great War left on many minds an impression that even the mightiest armada was no longer able to dominate the world's waterways, and that any nation owning a few submarines would be in a position to defy it. The fallacy of this idea has since been generally discovered. Now, as before, the dominion of the sea is vested in the strongest fleet. The most that can be said is that the difficulties and perils incidental to the exercise of sea command have been aggravated by the submarine arm.

Between the situation of Germany during the war and that of a minor State threatened with naval attack there is no true analogy. Germany was a

great Power, in possession of a formidable fleet, and having at her disposal a highly-developed economic organisation. She was therefore able to build submarines in very large numbers, and having built them to man them with efficient crews drawn from the battle fleet. A country of limited industrial resources could not hope to emulate the German example. Again, but for the existence of the High Sea Fleet the U-boat campaign could never have developed as it did. Under cover of the fleet the submarines were free to enter and leave their bases without undue risk. Had this protection been withdrawn the bases would infallibly have been destroyed or sealed up by the stronger naval Power. It is as an auxiliary to the surface fleet that the submarine is most to be feared. Without the support of other naval weapons it can accomplish little, and in no conceivable circumstances force a decision.

CHAPTER II

BRITAIN'S NAVAL PROBLEMS AND POLICIES

THE close of the Great War found the British Navy at the zenith of its power. For more than four years the shipyards of the kingdom had been working at high pressure to meet the insatiable demand for fighting tonnage. Between the outbreak of hostilities and the Armistice, a period of fifty-one months, close upon 2½ millions tons were added to the Fleet, a total exceeding the output of the previous twenty-five years. The net increment, after deducting war losses, was 706 vessels with a total displacement of 913,800 tons. At the date of the Armistice the White Ensign was flown by 1354 combatant vessels, with an aggregate of 3,250,000 tons, forty-two of these being capital ships of the Dreadnought type. There were 109 cruising ships, 13 aircraft-carriers, 527 destroyers and torpedo-boats, and 137 submarines. In actual fighting potency the combined fleets of the other Allied and Associated Powers were overshadowed by this gigantic force.

When the return of peace made sweeping reductions inevitable, the authorities found themselves confronted with a difficult problem, to which precedent offered no solution. No previous war in which Great Britain had engaged had ended in the complete destruction of her adversary's naval power. A year after Trafalgar the French Navy was still formidable, on paper at least, and neither then nor later was any artificial restriction imposed upon its future dimensions. But with the signing of the Versailles Treaty in 1919 the German Navy, which for many years had

served as the gauge of British naval power, virtually ceased to exist.

It remained, then, to find some new standard by which to regulate the future dimensions of the fleet. At this date the traditional policy of supremacy had not been renounced. On the contrary, it was reaffirmed in the most emphatic manner by leading British statesmen. Speaking soon after the Armistice, Mr. Winston Churchill said: "Nothing in the world, nothing that you may think of, or dream of, or anyone may tell you; no arguments, however specious; no appeals, however seductive, must lead you to abandon that naval supremacy on which the life of our country depends." When those words were uttered the superiority of the British Navy in all respects was very marked. Its material, however, consisted entirely of ships built before or during the war, most of which showed the effects of prolonged and arduous service. Of its capital ships, all save three were of pre-war design, and not a single unit could be said to embody the considered lessons of war experience. The fleet was therefore a wasting asset, and the continuance of its supremacy depended upon one of two conditions: the first, that no foreign Power would resume naval construction on a large scale; the second, that Britain herself would build a proportionate quota of new tonnage to replace obsolete ships.

For several months after the Armistice it seemed as if the first condition were to be fulfilled. Naval shipbuilding abroad, where not entirely suspended, was restricted to the leisurely completion of vessels begun under the wartime programmes. France and Italy definitely cancelled their unfinished battleships, and the total number of such vessels under construction in the United States and Japan did not exceed five. Great Britain therefore had no immediate cause to be alarmed for her naval position. The state of the national finances was such as to necessitate

rigorous economy. As a preliminary measure the shipbuilding programme in hand at the time of the Armistice was revised. Eighty-six vessels, including three battle-cruisers, were cancelled, leaving 125 to be completed. Of these only fifty were combatant craft, the remainder being minesweepers, tugs, etc. Meanwhile the demobilisation of the Grand Fleet and subsidiary squadrons was proceeding as rapidly as circumstances permitted. A year after the war the following ships were in commission :—Atlantic Fleet : twenty-nine capital ships, aircraft-carriers, cruisers, and auxiliaries, ninety-seven destroyers, thirty-five submarines. Local Defence and Auxiliary Patrol : fifteen vessels. Miscellaneous Service : twenty vessels. Mediterranean Fleet : sixty-three vessels. Other Foreign Stations : seventy-three vessels. In many quarters this establishment was criticised as excessive, having regard to the absence of serious rivalry, particularly in European waters.

British naval policy in the first years after the war betrayed an uncertainty of purpose. The old standards which had governed the composition and distribution of the fleet had passed away, and as yet there was nothing to take their place. Alike in the North Sea, the Channel, and the Mediterranean, our supremacy was absolute and unchallenged. Had all the other navies of Europe been amalgamated, their combined strength in 1919 would have represented but a fraction of British naval power. Under these circumstances there was no adequate motive for keeping a large fleet in commission. The Admiralty seemed unable to divest itself of "the North Sea habit of mind," for a great battle squadron continued to cruise in Northern waters long after the German menace had disappeared. The truth was, however, that cogent reasons for transferring the bulk of the fleet to a more distant cruising ground had not yet arisen. There were no symptoms of naval activity in the Mediterranean, where the French and Italian

dockyards were practically idle, while the huge American and Japanese building programmes which were soon to dominate the whole naval outlook had scarcely begun to take concrete form.

Following the official abolition of the Grand Fleet on April 7, 1919, the best of its material was incorporated in the newly-organised Atlantic Fleet. This force comprised nine battleships and five battle-cruisers, a " flying squadron " of five aircraft-carriers, a light cruiser squadron, three destroyer and four submarine flotillas. A second fleet, designated the Home Fleet, was also formed, consisting of six battleships, a cruiser squadron, and two destroyer flotillas. To the Mediterranean Station were despatched six battleships, six light cruisers and sixteen destroyers. Thus in the late summer of 1919 there were in commission twenty-one battleships and five battle-cruisers, besides a very large number of cruisers and lesser craft.

Since the strength of the Fleet at this period was obviously much above actual needs, it is not surprising that the Treasury should have intervened. Its pressure was so far effectual that the Home Fleet was abolished in October 1919, though some of the ships were merged in the Atlantic Fleet. The surplus battleships and other vessels were formed into reserve divisions at five different ports, each under a Rear-Admiral. The liberal view of our naval requirements which the Admiralty took a year after the peace is shown by the fact that in Nov. 1919 no less than thirty-two flag-officers held appointments in the active and reserve fleets. With this large establishment to be kept up, naval expenditure necessarily remained at a high figure. The Navy Estimates for 1919–20 amounted to £157,528,800; those for the following year to £84,372,300.

Many incidents of official prodigality at this stage might be cited. Obsolete ships of little or no fighting value were reconditioned at heavy expense, a notorious example being that of the twenty-year-old cruiser High-

flyer, which in 1919 was refitted at a cost of over £95,000 to serve as flagship in the East Indies. About a year later she was sold to shipbreakers at Bombay. While it was impossible to justify such flagrant cases of wastefulness, against the general charge of extravagance the Admiralty was able to offer some defence. The country was reminded that the Estimates for the early years of peace bore little relation to the current requirements of the Navy. "Normal" or "peace" expenditure could not be disentangled from the heavy commitments bequeathed by the war, the liquidation of which took time. "It should be borne in mind" (said an Admiralty memorandum) "that the conclusion of the Armistice, so far from finding the war effort of the nation on the decline, found us at the height of our endeavour to win the war. The weekly rate of expenditure on the Navy at the time of the Armistice was actually about £6,750,000, or at the rate of more than £350,000,000 a year."

Nevertheless, when the post-war Estimates came to be analysed, it was seen that the heaviest expenditure was due to the maintenance of that "Fleet of the minimum strength which, in the opinion of the Board of Admiralty, can be regarded as providing in present circumstances for the security of the Empire." To unofficial observers, however, the Empire in 1920 seemed remarkably free from external menace of any description, nor was there reason to suppose that its security involved the upkeep of so large a naval force in home waters. In that year the Atlantic Fleet was composed of fourteen Dreadnought and battle-cruisers, two cruiser squadrons, four destroyer and three submarine flotillas. To suggestions that the strength of this Fleet might safely be reduced in the interests of economy, the Admiralty replied: "This is the least number of units to ensure progressive tactical training. A lesser number would destroy the possibility of exercises at sea under realistic conditions; the tactical units would be reduced to such an extent that the

problems of gunnery concentration, fleet torpedo tactics, destroyer attacks, and anti-submarine tactics could not be studied and practised; the sea training of officers and men would suffer, and progress would cease. To have one fleet in which the lessons of the war can continually be practised and new tactical methods devised has been one of our principal objects in maintaining that the Atlantic Fleet should be of the strength laid down."

These arguments notwithstanding, the demand for retrenchment soon became too insistent to be disregarded. Sweeping reductions had to be made, and in due course the Atlantic Fleet had shrunk to six capital ships in full commission (with four others attached as training ships for boys), one cruiser squadron, two destroyer flotillas, and one of submarines. Its strength has, in fact, been cut down by more than one-half, yet tactical training still goes on, and there are no complaints of progress having ceased.

The Admiralty's shipbuilding policy since the war deserves more than casual attention. Apart from the "Renowns" and the nondescript "Furious" class, the only capital ships to be laid down in the war period were the four "Hoods," three of which were subsequently cancelled. They were ordered before the Jutland action, but after that engagement the plans were recast to embody improvements, particularly in armour and sub-surface protection, suggested by experience under fire. The final design provided for a displacement of 41,200 tons, a speed of 31 knots, massive armour protection, anti-torpedo bulges, and a main armament of eight 15-in. guns. These ships were built to meet the German battle-cruisers then under construction, but never finished. The latter were vessels of 31,000 tons, 28 knots speed, and eight 14-in. guns. A margin of 10,000 tons displacement over contemporary German ships was thus deemed necessary.

When it was decided in 1921 to resume the building of capital ships in order to maintain the equilibrium which was jeopardised by the large American and Japanese programmes then in hand, the Admiralty recommended battle-cruisers of the "super-Hood" type, four of which were ordered in the autumn of that year. As they were cancelled by the Naval Limitation Treaty, few particulars of the design are known, but at a plenary session of the Washington Conference, held on Feb. 1, 1922, the American Secretary of State remarked that the British "super-Hoods" were to have been ships "in the neighbourhood of 48,000 or 49,000 tons." Unofficial reports credited them with nine 16-in. guns, though 18-in. guns were also mentioned.

Our new battle-cruisers would thus have been from 7000 to 8000 tons larger than the Hood, the Hood herself being 12,700 tons larger than the Tiger, her immediate predecessor. When the "super-Hoods" were designed, the largest foreign warships building or projected were the American Saratoga, of 43,500 tons, and the Japanese Amagi, of 42,000 tons. The British ships would therefore have established a new record in dimensions, just as the Hood and the Tiger had done in their respective days. It seems clear that the basic principle of British shipbuilding policy before the war remained in full operation after the peace. The object was to outdo all competitors in the size of individual ships and the calibre or number of guns. But it was a costly method and, as war experience proved, the results were not always satisfactory. That mere size is not a reliable index to fighting power was demonstrated at Jutland. In the course of that action German ships engaged and destroyed larger British ships to which, on paper, they were distinctly inferior.

Intensive competition in tons and guns had been initiated in the early years of the century, when Lord Fisher produced the Dreadnought. He hoped to

render the German fleet obsolete at a single stroke by building a type of battleship so superior to all existing types that Germany, as he supposed, could not imitate it for lack of the requisite resources, financial if not technical. It was an error of judgment that probably would never have been committed had the British Navy at that time possessed a competent war staff. But no war staff existed; Lord Fisher's masterful personality dominated the naval administration, and his "Dreadnought policy," destined to have such far-reaching and fateful consequences, was hastily launched without proper consideration. Those consequences will only be examined here in so far as they affected, and continue to affect, the British Navy and the post-war naval situation in general.

The Dreadnought was so superior in fighting power to earlier battleships that her appearance automatically rendered obsolete, not only the German battle fleet, but all other battle fleets, including the British. That this inevitable result should have been overlooked by the creators of the Dreadnought is hard to credit. If, however, it was foreseen, the motive for building the ship becomes almost inexplicable. Admiralty propaganda had led the British public to believe that its first squadron of Dreadnoughts would give the Navy a decisive and lasting advantage over all rivals, because, as has been said, other countries were assumed to be wanting in the technical experience and equipment necessary for the construction of such large vessels of war. In the face of palpable evidence to the contrary, it is amazing that this extraordinary thesis should have been accepted almost without demur. A few protests were heard, it is true, but they were drowned by the chorus of public applause that greeted this apparently definite check to Germany's naval pretensions.

The truth is, however, that the appearance of the Dreadnought, so far from embarrassing Germany, was an extraordinary piece of good fortune for her.

At this date her main fleet comprised ten first-class and ten second-class battleships, the latter being armed only with 9·4-in. guns. The contemporary British fleet mustered forty battleships, all armed with 12-in. guns, the oldest being equal to the German second-class ships. Our modern armoured cruisers numbered thirty-five, while Germany had no more than eight. On the day that the Dreadnought type of battleship and the Invincible class of battle-cruiser made their *début*, all these vessels were reduced to obsolescence. Great Britain had to write off seventy-five ships, Germany only twenty-eight. More than this, with the creation of a new standard of capital ship, Germany was in a position to resume the naval race on equal terms.

She was prompt to seize the opportunity. Her naval architects found no difficulty in designing ships fully equal, if not superior, to the original Dreadnought, and the reconstruction of the German Navy on a Dreadnought basis was pressed forward with the utmost energy. The task of enlarging the Kiel Canal to accommodate the new ships—a task which Lord Fisher had dismissed as being beyond Germany's financial means—was undertaken without delay and completed in eight years. By adopting the Dreadnought policy we had simply forfeited our enormous preponderance over the prospective enemy without gaining anything in return. Forced by the growing pressure of German competition to rebuild the Navy on a Dreadnought standard, we found that the cost of individual ships had nearly doubled. When it became manifest, as it soon did, that the former margin of numerical superiority, lost by ill-considered action, could not be recovered, we tried the expedient of forcing the pace in dimensions and capping each German type with something still larger. But since Germany always followed suit, the ratio remained more or less constant, without any marked gain in relative strength accruing to our Navy. During the ten years

preceding the Dreadnought era the average displacement of battleships increased by only 2000 tons. In the next decade, however, it rose by at least 12,000 tons. Yet by 1914 the strength of the British Navy as against the German had declined by 40 to 50 per cent. Such were the immediate fruits of the Dreadnought policy.

No useful purpose is served by dwelling upon past mistakes which have been recognised as such. It is to be feared, however, that the dubious principles which guided British shipbuilding policy in the pre-war years continue to guide it yet. In 1921 we were preparing to build warships of far greater tonnage than any foreign vessel then projected. Since our chief competitor at that time was the United States, of whose financial and technical capacity there could be no question, it must surely have been obvious that the challenge of the 48,000-ton " super-Hoods " was likely to be met by American vessels of greater tonnage, to which we in turn would doubtless have replied with something still larger. In 1920, indeed, the " capital ship of the future " was depicted by an eminent British constructor as a vessel of 57,000 tons, armed with eight 18-in. guns. It was fortunate that the Limitation Treaty came just in time to prevent a revival of the futile race for supremacy in tons and guns which the original Dreadnought had inaugurated.

But if battleship rivalry has ceased, the Treaty restrictions on other craft are too elastic entirely to exclude the spirit of competition. Here, again, the British naval authorities took a doubtful step when, in 1921, they laid down a new submarine of unprecedented size. This vessel, the X-1, displaced 2780 tons, and was therefore considerably larger than any submarine, British or foreign, built or building at that period. No hint has ever been vouchsafed as to the strategic or tactical functions for which this gigantic submersible was designed. But while its value for British naval purposes remains obscure, the type has

obvious merits as a commerce-destroyer, thanks to its extended radius of action, seaworthiness, and powerful armament. It is, in fact, precisely the type of submarine that might be used with deadliest effect against British shipping in a future war, and therefore the very last type that we should desire to see adopted by foreign navies. Yet the natural effect of our building this vessel has been to stimulate the production of monster submarines abroad, where several of even greater tonnage than the X-1 are now under construction. On a small scale the building of the X-1 was a repetition of the Dreadnought mistake.

It was popularly supposed after the war that naval tactics had been revolutionised by submarines and aircraft. The truth is, however, that although new methods of attack had produced new methods of defence, the principles of sea warfare had undergone no fundamental change. In the British Admiralty's judgment, the capital ship remained "the unit on which sea power is built up." Nothing had occurred to justify any pronounced modification in the status of the cruiser, the destroyer, or the submarine. Broadly speaking, the pre-war organisation of naval force had been vindicated by the test of war itself, and was therefore adhered to on the return of peace.

It is a striking fact that a campaign lasting more than four years, in which all the most powerful navies of the world were engaged, should have produced no novel departure in naval armament. The aircraft-carrier, which is often claimed as a war product, was already in embryo, though its development was, of course, accelerated by the war. In this respect the world conflict was singularly barren of innovation. The Crimean War gave birth to the ironclad ship, and the modern battleship had its prototype in the monitors evolved during the American Civil War. Thanks to a single spectacular exploit at the Battle of Lissa in 1866, the ram enjoyed a ridiculous priority among naval weapons for at least thirty years. The

future historian may discover a parallel in the prevailing popularity of the submarine. The only outstanding technical developments in the naval sphere that we owe to the last war are the anti-torpedo bulge—essentially a modern adaptation of an old idea; the mine-sweeping paravane, and certain instruments for the detection of submarines.

When we find, therefore, that the organisation of the Fleet in 1927 differs in no important respect from that of 1914, it does not follow that the naval authorities are merely displaying that hidebound conservatism which is supposed to be their special characteristic. If the British Admiralty has sinned in this matter, it has sinned in good company. The present-day organisation of the United States and Japanese fleets is practically identical with that of the British fleet. Even in France and Italy, where the capital ship has lost favour, Dreadnought squadrons are still maintained in full commission, their *rôle* in the general scheme of tactics being the same as in each of the three larger navies. The General Board of the United States Navy reported in 1921 that the capital ship, in their view, had lost nothing of its traditional status as the strongest fighting unit. Since no other class of vessel was able to give and take such heavy blows, the battleship remained indispensable to every well-balanced fleet. The Japanese Ministry of Marine published statements to the same effect.

The post-war distribution of British naval power described above remained in force till 1922, when the critical posture of affairs in the Near East made it expedient to strengthen the Mediterranean Fleet. There is little doubt that the appearance of British battleships in the Dardanelles and the Sea of Marmora during the crucial phase of the negotiations with Turkey had a pacifying effect. In a statement on the Navy Estimates for 1923–24 the Admiralty foreshadowed a permanent reinforcement of the

Mediterranean Fleet "to meet the general strategic situation." This was the first definite indication of a departure from the policy of keeping the bulk of the fleet in Northern waters. The strategic centre of gravity had begun to move eastward, and the British Navy moved with it. Thanks to the Washington Conference, the threat of Anglo-American rivalry had been averted, leaving Great Britain free to trnsfer her main squadrons from the Atlantic to the Mediterranean, where they were more conveniently situated for purposes of Empire defence.

From 1922, therefore, the Mediterranean Fleet was steadily augmented, until eventually it became the premier command. Malta, the headquarters of the Fleet, is 2000 miles from England, 6000 from Singapore, and 7400 from Hong-kong. Pending the completion of the new works at Singapore, it is the only port on the Eastern route where battleships of the largest dimensions can be docked. The geographical position of Malta invests it with prime strategic importance, and since it was annexed to the Crown in 1814 this island stronghold has been one of the corner-stones of British world power. But with the development of aviation the value of Malta to the British Navy has diminished. Its very proximity to the shores of three Continents, to which in great measure it owes its strategic importance, renders it exceptionally vulnerable to the new weapon of air power. This, however, is a risk that has to be accepted, for without the base at Malta it would be impossible for the British Navy to hold its own in the Mediterranean under war conditions.

Gibraltar is another indispensable place of arms. Though its guns may not entirely dominate the Mediterranean approaches, they would be a menace to hostile ships attempting to pass the Straits by daylight, while submarines and aircraft operating from Gibraltar would render even a night passage extremely dangerous. Clearly, therefore, the possession of

"The Rock" enables Great Britain to exercise a certain control over the Mediterranean, and consequently over the most important highway from West to East. The guns mounted at Gibraltar could probably throw their shells across the Straits, which are only 11½ miles wide. The 18-in. guns built during the war, and afterwards returned to store as surplus, might be useful additions to the defences of "The Rock."

The harbour has a water area of some 450 acres, and there is a small dockyard with three graving docks, none, however, being large enough to take "bulged" battleships. These works, which are situated on the western side, would be exposed to bombardment from the Spanish hills, as also would ships lying in the harbour. This risk was duly weighed when the building of the docks was contemplated, but it was finally decided that docks exposed to gunfire were better than none at all. A proposal to construct an artificial harbour on the eastern side, which could not be reached by gunfire, was rejected as too expensive.

The strategic future of Gibraltar has again come under discussion in recent years, owing to the recrudescence of the Tangier problem. Tangier itself is regarded as a strategic position of the first importance, ranking with Suez, Singapore, and Panama as one of the control-points of world traffic. Britain once owned it, but voluntarily gave it up because her rulers of that period (1684) lacked vision. The city is now under international control, and a deep-water port is being developed. It is obviously to the interest of Great Britain that the international status of Tangier should be preserved. With hostile warships and aircraft based on a port only 32 miles distant, the usefulness of Gibraltar as a naval harbour would be seriously impaired. Furthermore, long-range artillery mounted at Tangier and submarines operating from that port would be a menace

to navigation in the Straits. These considerations explain why the claim of any single Power, such as France or Spain, to exercise sovereignty over Tangier will always be resisted by Great Britain.

At the close of the war the British Navy was practicallyan oil-burning force. In the post-Treaty fleet fifteen of the twenty capital ships and all the cruisers and destroyers use this fuel exclusively, nor is there any prospect of a reversion to coal in future ships. Hence the chain of coaling stations round the globe upon which the Navy had hitherto depended for its freedom of movement no longer serves that purpose. To ensure the mobility of the Fleet it is necessary to convert these stations into oil-depôts. This is being done as rapidly as funds permit, but it will be several years before the work is completed. Priority is apparently being given to ports along the Eastern route, from Gibraltar to Hong-kong, the intermediate stations being Malta, Port Said, Suez, Aden, Ceylon, Rangoon, and Singapore. Oil depôts are also to be established at Jamaica, the Falkland Islands, Sierra Leone, and the Cape of Good Hope. A total expenditure of more than £4,500,000 is projected. The storage of oil-fuel for naval purposes is a problem in itself. Ground tanks offer conspicuous and vulnerable targets, as the German cruiser Emden demonstrated at Madras in September 1914. A few well-aimed shells or air bombs might destroy an entire depôt. Subterranean tanks are expensive to construct, but the security they give is well worth the extra cost. The fate of the Empire might depend on the integrity of the oil reserves at some remote point on the line of communications.

It is significant of the trend of British post-war strategy that no important extensions are contemplated at any British naval station overseas with the exception of Singapore. Developments at Hong-kong are forbidden by the Washington Treaty, and would in any case be of doubtful expediency, since

it is recognised that the Hong-kong base would almost certainly fall to military assault in the event of war with a great Asiatic Power. At Trincomali, Ceylon, the new headquarters of the East Indies Squadron, some improvements of a minor character have recently been made.

Broadly speaking, however, the bases of the British Navy outside home waters remain *in statu quo*. In the North Atlantic we have Halifax, Bermuda, and Jamaica. Under the Canadian Government's policy of retrenchment the Halifax yard has been virtually reduced to a care and maintenance footing. Bermuda, as headquarters of the North America Squadron, has a repairing yard and a large floating dock, which, however, will not accommodate a modern battleship. More than twenty years ago a British naval authority pointed out that "Bermuda is mainly of importance in the event of war with the United States. It would be also of some value as a base for the cruisers protecting the North American trade in the event of war with a European Power"—as indeed it proved to be during the World War. The late Lord Brassey, writing in 1903, said: "The growth of our naval establishment at Bermuda had its origin in the Trent affair. In the relations of abiding friendship between Great Britain and the United States, additions to Bermuda cannot be regarded as especially urgent from the standpoint of the statesman." This remark had reference to the building at Bermuda dockyard of new breakwaters, wharves, and roads, the work being completed in 1907 at a total cost of £700,000. Jamaica has an anchorage and a fuel depôt, but no other naval facilities.

There is a school of thought in the British Navy which dissents from the policy of subordinating all other requirements to the safety of the Mediterranean route. In view of submarine and aircraft developments, this route, it is argued, could not be kept reasonably safe for British naval or commercial

shipping if hostilities with a strong Continental Power were in progress, and it is exceedingly doubtful whether, in those circumstances, British ships of any type, other than submarines, would be able to navigate in the Mediterranean. The supposition that Britain could conduct a war in the Far East over a line of communications leading through the Suez Canal is also challenged. It presupposes the benevolent neutrality of the chief Powers in Europe, which is a somewhat precarious foundation on which to erect a far-reaching scheme of naval strategy.

A sounder plan, it is contended, would be to prepare an alternative line of communications via the Cape of Good Hope, which, although much longer, would be safe from serious molestation. With some slight improvement the existing bases at Sierra Leone, the Cape, Mauritius, and Ceylon would afford the necessary facilities for ships using this route, while Durban, with its newly-completed dock, which will take the largest warship, would be available as a half-way base for ships in need of repair. That the evacuation of the Mediterranean in a future war is a contingency to be reckoned with must be admitted. Our battleships would be exposed to fierce attack by the swift torpedo vessels, the submarines, and the aircraft which already form so large a proportion of other navies in the Mediterranean. Our light flotillas would be fully occupied in protecting the battle fleet, and the maintenance of an effectual patrol on the 1,900-mile route from Gibraltar to the Suez Canal would be out of the question. In view of the numerous foreign bases flanking this route, where hostile squadrons could assemble for a mass attack at any selected point, convoys would require exceptionally powerful escort, and the demands thus made on our naval resources might well prove to be prohibitive. For these reasons it would seem prudent not to rely solely on the Mediterranean as a highway to the East in time of war.

That the strategic freedom formerly enjoyed by the British Navy has been greatly curtailed as the joint result of naval limitation and post-war retrenchment is a self-evident truth. Any system of strategy based on the old standards of relative power must therefore be unsound and impracticable. Not only is the Navy now reduced to a one-Power standard in capital ship tonnage, but behind the active battle fleet there are no reserves. In 1914 we were able to muster about seventy armoured ships additional to those serving in the main fleet. This large force of " second-line " ships gave us an ample reserve of material for subsidiary purposes.

To-day we have twenty capital ships all told, a number that will eventually dwindle to fifteen in consequence of deletions to which we are pledged by Treaty. Clearly, therefore, we should not be able in a future war to undertake any secondary operations that called for the employment of heavy ships. During the Great War battleships were detailed as convoy guards whenever there was danger of powerful enemy cruisers raiding the traffic lanes. If that danger recurred in a future struggle it is doubtful whether battleships would be available to meet it. In certain other types our margin of relative strength shows a serious diminution since 1918. A protracted war would enable us to reinforce the Navy by new construction, but for the first year or two the authorities would be at their wits' end to find ships for the most urgent duties.

The naval outlook, however, is less gloomy than might be inferred from the foregoing survey. Against whatever loss of relative power we have suffered must be set the additional security we have gained by the elimination of competitive building on a serious scale. Up to the beginning of the present century the naval preparations of France were a constant source of anxiety. Then we had to meet the direct challenge of Germany, whose great battleship programmes were

avowedly designed to subvert our supremacy. Consequently, although our margin over the largest foreign navy was considerably greater both in 1900 and in 1914 than it is to-day, its maintenance involved not only unceasing effort and heavy expenditure, but a progressive embitterment of political relations and an ever-present risk of war. Few will contend that this state of affairs was preferable to the conditions now obtaining, under which we enjoy relief from the pressure of intensive competition and yet preserve a substantial measure of our former power.

The wisdom of any policy relating to national armaments is only to be determined by the degree of security it affords. Judged by that test our present policy appears to be justified. The Empire is more free from menace than it has been at any other time within living memory, and its safety is no longer wholly dependent on a more or less precarious margin of naval strength. Whether the British Navy of to-day is really adequate is a question which can only be answered by considering the extent of its responsibilities. According to the late Sir John Colomb, than whom no sailor of his period had a clearer perception of strategy, the fundamental law of all warfare is so to dispose one's force as best to secure the base of operations and ensure safety and freedom of communication. "To determine the base of operations we look at a commercial chart, which is nothing more or less than a map of the world, showing the tracks of thousands of ships passing and repassing from one part of the globe to another. We know that on the proper distribution of our forces depends the safety of these innumerable vessels, and that this involves the prosperity, nay, the very existence of the British Empire in time of war. It is in reality the income of the nation which is thus scattered broadcast over the ocean. On examining this chart, it appears that all the tracks radiate from one point—the Channel—and that there by far the greatest number of laden ships

are collected. One-half of all the ships we are to protect are at and round this point. The Channel is the key of the position, the vital spot to secure against surprise, and it must ever be the base of our naval operations throughout the world."

Although written many years ago, those words accurately sum up the British naval problem of to-day and to-morrow. All other requirements are secondary to the defence of that vital zone upon which the sea lanes of the Empire converge. For this reason a policy that contemplated the transfer of our main forces to some remote base, leaving the nearer seas destitute of protection, would be difficult to justify under any circumstances. In the past, it is true, we have waged war in more than one distant theatre, though never without retaining a force of sufficient strength to deter would-be aggressors nearer home. But with the depleted Fleet we now possess it would not be possible to conduct heavy naval operations at a great distance from England and at the same time maintain command of the home seas. In other words, so long as our Navy is restricted to a one-Power standard we shall do well to eschew strategic plans which connote a two-Power standard of strength.

Provided this rule is observed, our existing naval forces may be considered adequate. Of their ability to repel attack by any Power or imaginable combination of Powers in Europe there is no question. It may, however, be necessary to meet the growth of Continental submarine flotillas by an equivalent increase in our anti-submarine forces. At the present time all foreign navies save one are deficient in cruisers of the type most effective for commerce destruction, while the British Navy, in spite of the retrenchment it has undergone, still possesses a considerable number of efficient cruising ships. In this very important respect we are better off relatively than in pre-war days, when not only *the* potential enemy, but several other Powers, were well supplied with swift and

formidable cruisers. In capital ships we are stronger than all the other States of Europe combined, so much stronger, indeed, that if half our Dreadnoughts were sent to the Pacific, those remaining would still constitute the strongest battle fleet in Europe.

This statement may invite the query: Why, then, condemn as inadmissible the transfer of a section of the battle fleet to the Pacific? The answer is, because this would involve the transfer to the same region of a large number of cruisers and destroyers, the necessary satellites of the battleship, without which it is rendered immobile and impotent; and the absence of so many light craft would leave us dangerously exposed to cruiser and submarine depredations in the narrow seas. To station a battle fleet in the Pacific would mean, in effect, that we were trying to pursue a two-Power naval policy with a one-Power Navy.

CHAPTER III

THE BRITISH NAVY OF TO-DAY

It has already been observed that the material of the British Navy in 1919 consisted mainly of ships dating from the war or pre-war periods, and therefore not of the latest design. Furthermore, their efficiency had suffered as a result of arduous war service, which imposed a severe strain on structure and machinery. The normal process of decay in fighting value had been accelerated, particularly in the case of capital ships, by improvements in ordnance, torpedoes, and mines, the effectiveness of these weapons having increased very considerably since the older vessels were designed. Of the ten battle-cruisers the Hood alone could be ranked as a first-class unit. All the others were deficient in protection against gunfire and under-water attack. It was clear that they could not face the heavy guns of foreign ships then in service or approaching completion without incurring the risk of summary destruction, for the Jutland action had shown the thickest armour they carried to be penetrable by 12-in. projectiles at long range. No British battle-cruiser was torpedoed during the war, but the experience of the Inflexible in the Dardanelles, where she was all but lost through striking a mine, had revealed the dangerous vulnerability of these ships, not only to gunfire, but to blows below the water-line. Had they been retained in the post-war Fleet they would doubtless have received anti-torpedo bulges and additional armour, but no reconstruction within feasible limits could have brought them up to the modern standard of endurance.

The battleships had been less severely tested, though the loss of the Audacious by a mine—which apparently caused a later explosion in the magazines —gave rise to misgivings on the score of their under-water protection which admittedly influenced the subsequent strategy of the Grand Fleet. On the other hand, the Marlborough at Jutland survived the impact of a torpedo and was able to keep station for several hours afterwards without serious loss of fighting power. In the same action four ships of the "Queen Elizabeth" class stood up well to a punishing fire from the German van division, and although suffering many casualties and extensive damage, were neither disabled nor silenced. It must be remembered, however, that the largest German gun in action at Jutland was the 12 in., which was, of course, much less powerful than the 16-in. calibre that was coming into vogue abroad.

From the experience gained in this battle a new design of capital ship was evolved, known as the "post-Jutland" type. It differed from its predecessors in having guns of heavier calibre; massive armour protection to vital parts—including thick steel decks to resist projectiles fired at long range, and therefore descending at a steep angle; and a more complete system of bulkheading to localise the effect of under-water explosion, this method of minute sub-division being associated in some ships with external bulge protection. There is no question that ships designed on post-Jutland principles have a pronounced superiority in offensive and defensive power over their predecessors.

It was because all the capital ships being built abroad at the end of the war belonged to this new and formidable type that the relative strength of the British battle fleet was considerably less than its dimensions indicated. On the eve of the Washington Conference no fewer than thirty-two post-Jutland ships were under construction or authorised in the

United States and Japan, the last being due for completion by 1927. The British Navy contained only one ship, the Hood, that could be said to embody the lessons of Jutland, and even this vessel was inferior in power to the latest foreign types. The Conference, however, arrested the development of the post-Jutland battleship by restricting the displacement of new vessels to 35,000 tons and the calibre of their guns to 16 in. It also cancelled twenty-seven foreign and four British units of the post-Jutland class, the latter having been ordered in the summer of 1921. Since the United States was allowed to retain three ships of this class and Japan two, Great Britain was authorised to build two vessels which, together with the Hood, would give her the quota of post-Jutland tonnage prescribed by Treaty.

Laid down in 1922 and not completed till 1927, these two battleships, Nelson and Rodney, may be said to constitute the spearhead of the modern British battle fleet. Full particulars of the design have yet to be disclosed, but its general features are well known. Speed is subordinated to armament and protection. The proportion of weight allotted to armour is believed to be the highest in any existing ship, with the possible exception of the Hood. Beneath the main protective deck, which shields the machinery, boilers, and magazines, the hull is a veritable honeycomb of water-tight compartments, the enormous breadth amidships—106 ft.—enabling full advantage to be taken of the system of sub-division which war experience proved to be so efficacious in minimising the torpedo danger. No external bulge is fitted, but the integral features of this device have been incorporated in a modified form. Although the Nelson was built to a "standard" displacement of 35,000 tons, her actual weight with oil-fuel and water tanks filled is approximately 38,000 tons, so that she exceeds by some 4000 tons the "Marylands," which are the largest ships in the United States Navy.

The armament of nine 16-in. guns is the heaviest ever actually mounted afloat, though certain of the American battleships cancelled under the Treaty were to have carried twelve of these guns, and the Japanese Kaga and Tosa would have had ten. As it is, however, the Nelson and her consort are unique in weight of broadside fire. The three triple turrets are disposed on the centre-line in the forward part of the ship, the barbette of the second turret being elevated to permit its guns to fire ahead over the first turret. By this arrangement six guns can be trained ahead and nine on either beam, but a target bearing astern could not be brought under fire. The complete loss of stern discharge is condemned by some naval officers as a serious defect. From the tactical point of view it can only be justified on the assumption that the ships will always be accompanied by others which can develop a powerful fire astern. Even so, the presence of two units that are only able to train their guns through a limited sector might conceivably prove an embarrassment to the fleet commander.

The conventional system of mounting an equal weight of armament at bow and stern was adopted less with the idea of securing an all-round field of fire than of providing that at least half the armament should continue to bear in whatever direction a change of course might place the target. Thus in the Jutland action, when the sudden appearance of the German main body compelled the British battle-cruisers to execute a right-about turn, they were still able to maintain a heavy fire from their stern guns. Had the armament of the battle-cruisers been mounted on the Nelson plan, they could not have fired a single shot at the enemy after making their 16-point turn. But although the new system of turret grouping is open to criticism on tactical grounds, it offers important technical advantages. The guns themselves, the turrets, the barbette trunks, and the magazines are brought within a limited space instead of being

distributed over the greater part of the ship, and can thus be given stronger armour protection than would be possible for the same weight if the gun positions were more widely dispersed. It is most desirable that this additional protection should be given, since at Jutland and in other actions of the war the percentage of hits on gun-turrets was extraordinarily high, and such hits proved to be the most disastrous. If, therefore, a serious element of weakness has been removed by dispensing with an all-round field of fire for the guns, the gain in safety may be held to compensate for the sacrifice of tactical efficiency.

The Nelson and her sister are unofficially credited with a maximum speed of 23 knots, which makes them a trifle faster than the "Royal Sovereigns"—whose original speed of 23 knots may have been slightly reduced by the addition of bulges—and two knots slower than the "Queen Elizabeths." Few will condemn the Admiralty for choosing gun-power and protection in preference to speed. A study of war data has evidently convinced British naval opinion that great speed is not worth the disproportionate loss of hitting and resisting power it entails. Vice-Admiral Sir Alfred Chatfield, the Third Sea Lord and Controller in 1926–7, whose war experience entitles him to speak with complete authority, has openly challenged the doctrine of high speed which was so much in favour before the war. In the course of a discussion at the Institution of Naval Architects in 1920, he said: "Speed has been very much emphasised lately as being the great thing in warfare. That is not the experience of those who fought at sea. There is a partial fallacy in the statement that speed will enable you to choose your range, that if you have got the speed you can decide whether you are going to engage the enemy or not. But it is always the duty of a British ship to engage the enemy, and so you do not want speed for running away. Again, is it true to say that speed enables you to choose your range?

Those who have been in action know perfectly well that in 90 cases out of 100 the factor which determines the range at which you will fight is the weather. If you cannot see more than 10,000 yards it is no good having speed which would enable you to keep 25,000 yards off. You have got to come in to the distance at which you can see the enemy, and when you come into that range then the man who has got plenty of speed but no protection finds himself in a very awkward position."

Those words constitute a serious indictment of the Fisher policy of naval construction, which gave the British Navy many ships whose tactical efficiency was dependent on exceptional weather conditions. It is a mistake not likely to be repeated while memories of Jutland endure. The Fisher policy found its supreme expression, not to say its *reductio ad absurdum*, in the group of "mystery cruisers" ordered early in the war. They combined high speed and ponderous armament with protection so flimsy that Admiral Jellicoe refused to admit them into the Grand Fleet until they had been partly rearmoured. Two of these ships, the Renown and Repulse, still remain in the battle fleet, after having been reconstructed at a cost of nearly £1,000,000 per ship. Though much improved in the essential quality of protection, they are still too vulnerable to be risked against battleships, even of pre-Jutland type.

Next to the Nelson and Rodney, the most useful battleships in the Navy are the five "Queen Elizabeths." Designed as long ago as 1912 they still compare favourably with ships of more recent date, none of which reproduces all the admirable features of this class on the same moderate displacement. With a main armament of eight 15-in. guns and an auxiliary battery of twelve 6-in. quick-firers, heavy plating on the waterline and gun positions, excellent under-water protection, since increased by the fitting of bulges, and a sea speed of 25 knots, which can still be reached

without difficulty, they approach as nearly to perfection as a steam-driven man-of-war has ever done. To their other merits must be added that of steadiness in a seaway. British and foreign naval critics are at one in acclaiming the "Queen Elizabeth" design as a masterpiece of marine architecture. The five "Royal Sovereigns" were designed a year later. With the same armament as the "Queen Elizabeths" —plus two 6-in. guns—and much the same system of protection, they are from two to three knots slower, and their lively movements in heavy weather render them unstable gun platforms.

In this respect the four older and less powerful ships of the "Iron Duke" class are superior. These were the finest battleships of the pre-war Fleet, and even to-day they will bear comparison with all but the best ships in other navies. Their armour protection is fairly good, and their ability to withstand torpedo attack was exemplified by the Marlborough at Jutland. But for the fact that, under the Treaty, they are due for replacement in 1934, it would be sound policy to modernise the "Iron Dukes" by fitting them with bulges and converting them to oil-fuel. American battleships of older and less powerful design have lately been reconditioned in this way, though they also are due for scrapping in 1934. The fighting value of the "Iron Duke" class is greater than it appears to be on paper, for the 13·5-in. gun they carry is equal in weight of projectile and superior in other ballistic properties to the 14-in. 45-calibre gun mounted in foreign ships. For "war game" purposes the Iron Duke would be entitled to the same rating as the U.S. Texas, or even the Nevada, though in the text-books the British ship is usually classed below her American contemporaries.

The sixteen battleships of the post-Treaty fleet thus comprise four different classes, ranging from 35,000 to 25,000 tons—or, on full-load displacement, from 39,000 to 28,800 tons, the main armaments

being, respectively, nine 16-in., eight 15-in., and ten 13·5-in. guns.

The four remaining ships of capital rank are battle-cruisers, viz. Hood, Renown, Repulse, and Tiger. The first-named is the largest warship in existence, displacing 45,000 tons at full load. In main armament she is identical with the Queen Elizabeth. In protection above and below water she is rather superior. The Hood attained a speed of 32 knots when running her trials in bad weather with a load exceeding her legend displacement by 1000 tons. She is therefore a wonderfully swift ship, but it is well to note that this increase of seven knots over the Queen Elizabeth, coupled with a slight superiority in armour defence, has involved an addition of 14,000 tons to the displacement. The Repulse and Renown have already been mentioned. They are ships of 26,500 tons normal and 32,000 tons full-load displacement, as swift as the Hood, but mounting only six 15-in. guns instead of eight, with a feeble auxiliary armament, and armour protection which, measured by the lowest prevailing standard, is inadequate both as to thickness and distribution. The retention of the "Renowns" in the Navy might be justified on the grounds that Japan has four older battle-cruisers, and that it is desirable to maintain an equilibrium in this as in other types. Be that as it may, the Japanese vessels of the "Kongo" class are, on the whole, superior to the Renown and Repulse, which are, perhaps, the least war-worthy units of the present battle fleet.

Owing to the Treaty restriction of aggregate battleship tonnage, the relative fighting value of other ships not subject to numerical limitation has been substantially augmented. Of these the cruiser is the most important. It is a somewhat ironical circumstance that a compact designed to arrest the growth of naval armament should, in practice, have stimulated the development of a vessel which has always

played a prominent part in naval warfare. At the date of the Washington Conference the great majority of the cruisers afloat and under construction were ships of less than 8000 tons; indeed, the only modern cruisers exceeding that tonnage were five British ships which had been built during the war expressly for the purpose of hunting German raiders. The mean displacement of the other British cruisers, some fifty in number, did not exceed 5000 tons. In the United States Navy there were ten cruisers of 7500 tons. Japan favoured smaller ships, those she had built since the war averaging only 5550 tons. At a very liberal estimate, the average displacement of the world's cruisers in 1921—excluding obsolete vessels —was not above 6000 tons. Yet the Conference, for reasons never explained, saw fit to establish maxima of 10,000 tons for future cruisers and 8-in. for gun calibre, despite the fact that only five existing ships of this type mounted guns heavier than 6-in.

What followed might have been foreseen. Just as the statutory maximum prices for vital commodities in Great Britain and other countries during the war period automatically became minimum prices, so have the highest Treaty limits on cruiser displacement and armament come to represent the lowest standard which naval opinion will accept. The first cruisers to be designed after the Washington Conference were four Japanese ships, displacing 10,000 tons and armed with 8-in. guns. At the close of 1926, *i.e.* three and a half years after ratification of the Treaty, the cruiser-building programmes of the five leading navies comprised fifty-three ships, and all save fourteen of these were of the 10,000-ton class. It is morally certain that but for the stimulus which the Treaty gave to their development, most if not all of the cruisers now under construction would have been vessels of less than 7500 tons. The creation of this new and powerful type of cruiser has been a serious matter for the British Navy. Four-fifths of

its cruiser tonnage has been rendered obsolete, since it is clear that vessels of 5000 tons, armed with 6-in. guns, would be powerless against antagonists of 10,000 tons mounting 8-in. guns. It has thus become necessary to replace the small and lightly-armed ships by an equal number of the Treaty type, for the British Empire, with 80,000 miles of sea routes and a vast floating trade to protect, cannot afford to be short of cruisers equivalent in fighting power to the strongest foreign ships.

The task of replacement was begun by the Labour Government in 1924, which legislated for five cruisers of the Treaty standard to be laid down in that financial year. In August, 1925, the Conservative administration brought in a building programme to cover requirements for five years. From 1925 to 1929, inclusive, cruisers were to be built at the rate of four in the first year and three in each year thereafter, making a total of sixteen ships. Nine of these were to be of the Treaty type, *i.e.* 10,000 tons, while seven were to be of a smaller type, displacing about 8000 tons. This programme was duly adopted by Parliament and is now in process of execution. Its full completion depends, of course, on the continuance of the Conservative régime during the period in question, for a change of Government would doubtless involve some modification of shipbuilding policy. Thus, in estimating the cruiser strength of the Navy it is prudent to include only such ships as were laid down before the close of the financial year 1926–7.

When all the vessels now under construction are ready we shall have eighteen ocean cruisers, or twenty if the two Australian ships be added. The oldest are the four sister-ships : Hawkins, Effingham, Frobisher, and Vindictive, dating from 1916–17, and specially built for the pursuit of German commerce raiders. With a view to increased seaworthiness and radius of action they were designed for a much larger tonnage

(9750 tons) than preceding ships, the speed was increased to 30 knots, and a powerful armament of seven 7·5-in. guns mounted. The Vindictive before completion was converted into an aircraft-carrier, but has since been rebuilt to the original cruiser design, and now differs from her sisters only in having an aeroplane catapult in place of the second 7·5-in. gun. They are fine weatherly ships, able to maintain high speed in a seaway and capable of steaming great distances without replenishing fuel. In fighting value they are but little inferior to the Treaty type, which they might engage without undue risk. As regards protection they are probably superior, for in the Treaty cruiser, with its enormous weight of machinery and armament, scarcely any margin is left for armour. A fifth unit of the above group, the Raleigh, was most unfortunately lost off the Labrador coast during her maiden commission.

Of smaller tonnage but higher speed are the Emerald and Enterprise, begun in 1918 as a reply to the new German fleet cruisers in hand at that time. Displacing 7600 tons at normal draught, they have a speed of 33 knots. The armament of seven 6-in. guns appears to be rather weak, and would not qualify them to face vessels of the Treaty class. Nevertheless, they are useful ships for the protection of commerce, and the 8000-ton "B" class cruisers of the new programme may be found to resemble them in general design. The Adventure, a "cruiser-minelayer" begun in 1922, is too lightly armed to be employed as a cruiser. She displaces 7260 tons, has a speed of 27¾ knots, and carries a thousand contact mines. Mounting only four 4·7-in. guns, she would be at the mercy of the smallest cruiser swift enough to catch her. It is to be regretted that the design did not provide for guns of greater power. Except that she probably has a greater radius of action, the Adventure does not compare well with the German minelaying

cruisers Brummer and Bremse, which were built during the war. On a displacement of only 4000 tons, they mounted four 6-in. guns, with two torpedo tubes, carried more than 300 mines, and could steam at 28 to 30 knots.

At the time of writing three cruisers to be laid down in 1926–7 had not been named. The eleven preceding ships are the Berwick, Cornwall, Cumberland, Kent, Suffolk, London, Devonshire, Shropshire, Sussex, Australia, and Canberra, the last two being units of the Royal Australian Navy. All are understood to be identical in tonnage, speed, and armament, though there may be minor differences in appearance and equipment. They are flush-decked ships of ample freeboard, with light armour protection and anti-torpedo bulges. The sea speed is reported as 32 knots, and the armament consists of eight 8-in. guns of a new high-velocity model, paired in steel turrets, two forward and two aft. As the broadside discharge is from eight guns, throwing 250-pound projectiles, with a range of about 20,000 yards, the immense tactical superiority of such ships over the pre-Treaty cruiser, with its 6-in. guns firing 100-pound shells, is evident.

The new "County" vessels named above are considerably larger than their "standard" displacement indicates, because this figure does not include fuel, of which they may carry as much as 2000 tons. Actually, therefore, they will approach 12,000 tons when in sea-going condition. They are admirable ships for commerce protection, but too thinly armoured to face the fire of heavy guns. Their great length and the large area of hull occupied by boilers, machinery, and magazines make them exceptionally vulnerable targets. A duel between such vessels, unless fought at extreme range, would doubtless be a most sanguinary affair, liable to end in mutual annihilation. Their gun-power is out of all proportion to their capacity for standing punishment, in which

respect they are not unlike the earlier British battle cruisers. An Admiralty estimate of shipbuilding requirements made in 1923 showed that fifty-two new ocean cruisers would be needed in the next ten years. Only fourteen have been provided so far, and it is extremely improbable that the full total will be reached by 1933. By that date practically all the smaller ships which form the bulk of our present cruising fleet will be obsolete, not only through age —accentuated in many cases by the wear and tear of war service—but because most of the cruisers then serving under foreign flags will be of the powerful Treaty type.

At the end of 1926 there remained on the active list thirty-three cruisers of the "C" and "D" classes, all of which were laid down during the war. The "D" ships, eight in number, are the best of this group. They displace 4650 tons, with a nominal speed of 29 knots —which, as they are overloaded with extra equipment, is rarely attained—and an armament of six 6-in. guns. Having been built primarily for service in the narrow seas, their radius of action is limited and their speed falls off in heavy weather. Smaller still are the twenty-five "C" class ships, averaging only 3900 tons, and armed with four or five 6-in. guns. For duty with the Fleet and for short-range patrol the "C" and "D" cruisers are not without value, but they have neither the seaworthiness, speed, nor power essential to ships engaged in the protection of commerce on the ocean routes. It is popularly assumed that the days of the "Alabama" and "Emden" type of corsair are over, and that in future wars only the submarine commerce raider need be feared. This, however, does not accord with recent experience. While the submarine menace was defeated by the convoy system, we were never able to afford our seaborne trade the same degree of immunity from surface raiders, such as the Karlsruhe, Moewe, and Wolf. Had Germany despatched

more of these vessels to prey upon commerce we should certainly have suffered proportionately heavier loss, and our naval difficulties must have been greatly increased.

Turning from cruisers, and adhering to the official order of precedence, we come next to the monitors, three in number, these being the only survivors of a large fleet of such vessels called into being by the exigencies of war. The Marshal Soult, being relegated to harbour service, may be ignored; but the twin monitors Erebus and Terror are still efficient, and in certain circumstances might prove of the utmost value. The only ships in the Navy specially designed for long-range bombardment, they were built for service with the Dover Patrol, to which they soon became indispensable. They repeatedly shelled the German coastal defences in Flanders and became such a thorn in the side of the enemy that determined efforts were made to destroy them. But although attacked by gunfire, submarines, aircraft, and explosive boats, they escaped serious damage. They are sea-going ships of 8000 tons, with a speed of 12 knots. The armour defence is scanty, but they have huge bulges which make them practically invulnerable to torpedo attack. On one occasion the Terror was hit by three torpedoes, yet she made her way back to harbour and was repaired in a few weeks. Each monitor carries a pair of 15-in. guns on high-angle mountings, the range of these weapons at full elevation probably surpassing that of any other guns at present afloat.

Ships of far greater importance, however, are the aircraft-carriers, which now form an integral component of the naval organism. The type is still in an experimental stage, and its subsequent development, being influenced mainly by that of the aeroplane itself, is difficult to forecast. So long as aircraft are only able to "land" at a fairly high velocity, the floating platform to which they descend must perforce be of

generous dimensions. Hence the great length and breadth of carriers now in service, the American ships Lexington and Saratoga having landing decks with an area of five acres.

The largest British aircraft-carrier is the Eagle: displacement 22,790 tons, length of flight deck 667 ft., breadth of same 100 ft., speed 24 knots; armour and bulge protection; nine 6-in. guns. The Eagle was designed in the first instance as a Chilean battleship, but was purchased and reconstructed during the war. More useful, perhaps, owing to their greater speed, are the three ex-cruisers Furious, Glorious, and Courageous, of 18,600 to 19,100 tons and 31 knots. The Argus, of 14,450 tons and 20 knots, is a former passenger liner. Her speed is much below modern requirements, and she is likely to disappear from the effective list before very long.

The Hermes is the only aircraft-carrier in existence that was expressly designed and built for the duties she performs. She represents an attempt, and apparently a successful attempt, to produce a floating aerodrome of moderate size, her displacement being only 10,950 tons. Were the Hermes a 30-knot instead of a 25-knot ship she would approximate to the ideal in aircraft-carrier design as at present conceived. The nature of her service requires that the carrier shall have a substantial margin of speed over the battleships with which she co-operates. Not only has she to slow down when releasing her aeroplanes, and still more when they are about to alight on her deck, but it is often necessary to alter course for the convenience of homing machines. She may therefore fall far astern of her consorts, and an extra turn of speed is necessary to enable her to regain touch with them.

In attempting to solve the complex problems inherent to aircraft-carrier design, naval constructors have hitherto tended to follow the line of least resistance by accepting very large dimensions: *e.g.* the

American Lexington, of 33,000 tons, the Japanese Akagi, of 27,000 tons, and H.M.S. Eagle. It is, however, coming to be realised that this policy contravenes the wise rule of not placing too many eggs in one basket. No one has ever recommended that all the guns or all the torpedoes of the fleet should be concentrated in two or three ships, the destruction of which would entirely eliminate one or other of those weapons. Yet no hesitation has been shown by certain foreign navies in distributing most of their available aircraft among two or three gigantic carriers.

The Lexington and Saratoga have each a complement of seventy-two aeroplanes, and the Japanese Akagi is reported to have sixty. The sinking or disabling of one of these vessels in action would be a disastrous blow to the fleet to which it belonged, and for this very reason they would assuredly be singled out for fierce attack. But until aeroplanes are able to "land" at speeds much lower than the present minimum, the ships on which they alight must necessarily be of fairly large dimensions, and it is therefore not to be anticipated that carriers built in the near future will be smaller than 10,000 tons. The Washington Treaty fixes a limit of 27,000 tons for vessels of this type, though each contracting Power is authorised to build two carriers of not more than 33,000 tons. If an efficient helicopter-plane is ever evolved the problem of aircraft-carrier design will be greatly simplified, and ships of quite modest dimensions may then replace the monsters now in vogue.

No type of vessel rendered more useful war service than the destroyer. Regarded solely as a torpedo craft its performance was disappointing. About 130 of these boats took part in the Jutland action, mounting between them at least 500 tubes, yet they failed to score more than six or seven hits. In the judgment of some naval authorities the destroyer as a vehicle of torpedo attack is obsolete, its place having been taken by small, high-speed motor boats and

torpedo-planes. Be that as it may, the destroyer has other qualities which make it indispensable. It has become, in effect, a diminutive cruiser of immense speed and powerful armament, some of the newest specimens having a heavier broadside fire than small cruisers of the pre-war period.

This unique combination of mobility and offensive power endows the destroyer with great fighting value in proportion to its size. No other class of vessel was more directly responsible for the protection of sea traffic in the Great War. For a convoy under destroyer escort to sustain loss through submarine attack was a rare event, and so effectually did these little ships screen the Grand Fleet during its periodical cruises in the North Sea that not a single British Dreadnought was torpedoed by a U-boat. The universal appreciation of the destroyer as the surest antidote to the submarine menace is attested by the enormous number of these boats constructed during the war in Great Britain and the United States. Thrice-armed with ram, gun, and depth-charge, and able to pursue its prey at a speed of 40 miles an hour, the destroyer is, and promises always to remain, the submarine's deadliest foe.

From the beginning of the war to the end, 283 flotilla leaders and destroyers were added to the Navy, and a further 108 were under construction at the Armistice, forty-four of these subsequently being cancelled. The total force of leaders and destroyers in commission on Nov. 11, 1918, numbered 433. While this figure was, of course, greatly in excess of peace requirements, the scrapping of boats since the war has been carried to extreme lengths. By December, 1926, there remained only 159 boats, including those in Australian and Canadian service. That many of the scrapped destroyers were sound in structure, and only needed boiler retubing to restore them to complete efficiency, is admitted. Apparently, however, no money was available for this work, and

the boats were sold in batches to be broken up. How sorely they would be missed in an emergency is indicated by the insatiable demand for destroyers that arose when the German U-boat campaign was launched. In disposing of our redundant destroyers we might have emulated the methods of the American Navy, which has laid up nearly 150 surplus boats in various dockyards, after taking elaborate measures to preserve them from deterioration. Their structures, machinery, and equipment are inspected at regular intervals, and in case of need they could be made ready for active service at short notice. It takes much less time to recondition a laid-up warship than to build a new one.

Realising that a serious shortage of destroyers must soon result if the wholesale deletions were not balanced to some extent by new construction, the Admiralty ordered two experimental boats in 1925, the first to be laid down since the war. A further twenty-seven boats are to be built at the rate of nine a year from 1927–8, provided that the current naval programme is allowed to mature. It is clear, however, that this number is altogether inadequate unless regarded merely as a first instalment of the replacement tonnage that must be built if the Navy is to retain its present quota of destroyers, which constitute our main defence against submarines. Destroyers are now officially assumed to have a "life" of sixteen years, but experience has shown that one year's war service must be taken as equal to two years of peace duty. Since about eighty of our present destroyers served in the war, it follows that their normal span of useful life has been appreciably shortened. In view of the steady increase in foreign submarine strength the building of additional destroyers is advisable as a measure of precaution. Our latest boats, averaging 1325 tons, are expensive both to build and maintain. It should not be beyond the skill of our naval constructors to design a type of 1000 tons or less, with

good seakeeping qualities, a speed of 36 knots, and a powerful armament of guns and depth-charges. These smaller and cheaper boats would be quite powerful enough for anti-submarine work, which promises to be the principal function of the destroyer in future warfare.

Flotilla leaders are magnified destroyers, with a heavier armament and special accommodation for the senior officer of the flotilla and his staff. Originally introduced by this country, the type has since become very popular in France and Italy, where, however, it is being developed more as a swift gun-vessel than a torpedo unit, and with a view to independent action. The seventeen flotilla leaders now in the British Navy were all begun during the war. Seven are vessels of 1800 tons, with a speed of 36½ knots, mounting five 4·7-in. guns. In the next five boats the displacement sinks to 1550 tons and the speed to 36 knots, but the same armament is carried. The remaining five are of older design : 1670 tons, 34 knots, four 4-in. guns. The Abdiel of this group is equipped as a minelayer. At the present time no new leaders are under construction or projected. The destroyers number 159, thirteen of these being in Dominion service. They vary in size from 1325 to 900 tons, in speed from 37 to 34 knots, and in armament from four 4·7-in. guns and six torpedo tubes to three 4-in. guns and four tubes. Many are overburdened with equipment, some clearance of which might be effected without loss of fighting power.

The current tendency in all navies is to overload small craft with fittings suggested by war experience but not included in the original design, the inevitable result being reduced speed, impaired stability, and encumbered decks. Moreover, the complication of gear necessitates an increase in *personnel*, our latest destroyers carrying 120 officers and men, and the flotilla leaders 180. To crowd so many people into these small craft involves serious hardship in peace

and the risk of appalling loss in war, for they have absolutely no protection against gunfire. It is not surprising that a flotilla leader—the Broke—should have had the grim distinction of suffering the highest percentage of casualties at Jutland, apart from ships that sank. Two hundred officers and men were packed into this small vessel, of whom forty-seven were killed and thirty-six wounded, a percentage of 41·50.

Compared with boats of pre-war build, our present destroyers have a much wider radius of action. Thus the Tyrian, of only 930 tons, can cover a distance of 3260 nautical miles at a speed of 15 knots, and 650 miles at her full speed of 36 knots. The steaming endurance of the "W" class destroyers, of 1325 tons, is 1000 miles at full speed. Thanks to the adoption of geared turbines and improved boilers, warship speeds have increased very considerably in the past ten years. Destroyers are now engined for 37 knots, but this velocity has been surpassed by many boats in service, one at least having attained 39·7 knots, equivalent to $45\frac{3}{4}$ statute miles an hour.

Submarines first appeared in the British Navy in 1901. The original boats were built with a view to using them for anti-submarine experiments. It was hoped to discover an antidote to the new weapon, which was being so rapidly multiplied in France and other countries, and our earliest efforts were directed to that end, rather than to the improvement of the submarine itself. This policy, however, was speedily reversed. The offensive value of the submarine was recognised and its development prosecuted with the utmost energy. By the outbreak of hostilities in 1914 at least a hundred boats had been built, and in the course of the struggle 157 new submarines were ordered. These large building programmes sufficiently refute the idea that British naval opinion has always been opposed to the submarine. At the conclusion of the war we had 137 boats in commission and 73

building. The cancelling of thirty-three that were unfinished left a net total of 177 submarines. More than two-thirds of this tonnage has since been scrapped, and by December, 1926, the number of boats had dwindled to fifty-six. Twenty-four new submarines are included in the present programme, to be built at the rate of six a year.

Of those now available only thirty-five can be rated as ocean-going, the others being small craft of 440 tons whose value is restricted to coastal operations. The largest British submarine, X.1, is really a submersible cruiser, displacing 2780 tons above and 3600 tons below water. Her weight and bulk probably make her difficult to handle when in diving trim, and in all-round utility she must be reckoned inferior to submarines of half her size. The best units of the flotilla are thirty "L" boats, which naval officers consider to be the finest patrol submarines so far designed, whether in this country or elsewhere. Their surface displacement is 800 tons (960 tons in the last six), the surface and submerged speeds $17\frac{1}{2}$ and $10\frac{1}{2}$ knots respectively, and the armament one 4-in. gun (two in the larger boats) and four to six torpedo tubes. Three of the class are fitted for minelaying and have a capacity of 16 mines. An admirable feature of the "L" boats is the mounting of their guns in a position well above deck level, thus enabling them to be fought in a seaway.

The M.2 and M.3 are so-called submarine monitors, of 1600 tons displacement, with a surface speed of $15\frac{1}{2}$ knots. Each carries a 12-in. gun, which can be laid on the target by periscope observation while the boat is partially submerged. As these vessels were completed too late to take part in the war their tactical value remains speculative, but the ability to deliver 850-pound projectiles at point-blank range should render them dangerous antagonists to ships of any size. It is conceivable that a shell of this weight, driven into the vitals of a battleship, would prove

more destructive than a torpedo. The design of the "M" class, with the formidable deck loads it involved, presented entirely new problems of stability, the successful solution of which was a notable triumph for Admiralty constructors. In a class apart is the K.26, a slightly larger edition of the steam-propelled "K" boats that were built during the war to co-operate with the Grand Fleet. No opportunity occurred for testing them in a fleet action, and for ordinary submarine duties they were handicapped by their great size and complex machinery. The others have disappeared, and the K.26 is historically of interest as being in all likelihood the last submarine to be driven by steam.

Among the remaining vessels on the Navy List—sloops, gunboats, minesweepers, and auxiliaries—the coastal motor boats rank high in tactical importance. Many of these little craft were built during the war, and on the few occasions when chance offered they fully demonstrated their possibilities. They are, in effect, miniature torpedo-boats (11 tons), very lightly built, with petrol motors capable of driving them at 40 knots. The offensive armament consists usually of two torpedoes, carried in troughs at the stern, whence they are ejected tail-foremost by an air ram. At the moment of discharge the nose of the boat points straight at the target, but immediately afterwards the helm is put over and the boat turns away, leaving the torpedoes to race towards their objective. It is possible, however, by means of a certain ingenious mechanism in the torpedo, to deliver an attack when running broadside on to the target ship.

The coastal motor boat may eventually supersede the destroyer as an instrument of torpedo attack. It is, of course, useless in bad weather, but under favourable conditions its diminutive size and immense velocity should enable it to approach within torpedo range even of a vigilant and straight-shooting enemy. Since coastal motor boats are light enough to be

swung in the davits of a cruiser, their potential radius of action is unlimited. For surprise torpedo attack, whether by day or night, they are probably more efficient than the destroyer, while they are, of course, much less expensive to build and to maintain. In short, the " C.M.B." is a war product that has come to stay. All the leading navies are developing the type from models purchased in England.

CHAPTER IV

EMPIRE DEFENCE : THE BURDEN AND ITS BEARERS

" GREAT BRITAIN to-day is carrying the main burden of the defence of the Empire. We in Australia certainly recognise that our position is safeguarded by the fact that we are inside the British Empire, and can always rely upon the defence of our shores by the British Navy." This statement by the Australian Prime Minister at the Imperial Conference of 1926 proves that in one Oversea Dominion at least the value of British naval protection is fully appreciated. That the Navy exists to defend the Empire as a whole, and not Great Britain alone, is no new discovery. The fact has been patent for more than a century, yet even now there is some hesitation in drawing the logical conclusions. Great Britain, as Mr. Bruce truly observed, is supporting the main burden of Imperial defence. She is, indeed, supporting far more than her proper share of what ought to be a common burden. In war as in peace the Empire is a unit. No member-State can dissociate itself from the rest in time of peril. All must stand or fall together. Theoretically, therefore, the Empire should maintain a single fleet, controlled and administered by a central authority; a fleet to which all the States of the Empire contributed a proportionate share in money or in kind.

In practice this has not been found possible. The reasons were lucidly set forth in an Admiralty memorandum circulated to the Dominion representatives at the Imperial Conference of 1909. " It has long been recognised," wrote the Admiralty, " that in defining the condition under which the naval forces of the

Empire should be developed, other considerations than those of strategy alone must be taken into account. The various circumstances of the Oversea Dominions have to be borne in mind. Though all have in them the seeds of a great advance in population, wealth, and power, they have at the present time attained to different stages in their growth. Their geographical position has subjected them to internal and external strains, varying in kind and intensity. Their history and physical environment has given rise to individual national sentiment, for the expression of which room must be found. A simple contribution of money and material may be to one Dominion the most acceptable form in which to assist in Imperial defence. Another, while ready to provide local naval forces and to place them at the disposal of the Crown in the event of war, may wish to lay the foundation on which a future navy of its own could be raised. A third may think that the best manner in which it can assist in promoting the interests of the Empire is in undertaking certain local services not directly of a naval character, but which may relieve the Imperial Government from expenses which would otherwise fall on the British Exchequer."

The desire to create an autonomous naval force in place of the "subsidised squadron" hitherto provided by the British Government had always been particularly marked in Australia, where the organisation of such a force was begun in 1907. Canada two years earlier had offered to undertake the charge of maintaining the dockyards at Halifax and Esquimault, but it was not until 1910 that she acquired her first warships—two old cruisers purchased from the Royal Navy. A later proposal to build Dreadnought battleships led to a fierce political controversy, and the plan never matured. New Zealand, which had always shown a keen interest in naval defence, financed the construction of a battle-cruiser in 1909. The intention was to station this vessel in Eastern

waters as a unit of the proposed Pacific Fleet, but meanwhile the German menace had become more acute, and in 1912 New Zealand generously agreed to allow her ship to serve with the main British Fleet at home.

On the outbreak of war all the Dominions were able to assist in the naval defence of the Empire, some providing both ships and seamen, others contributing to the man-power of the British Navy. Australian warships were active in many seas; New Zealand's battle-cruiser fought with distinction in all the major engagements in home waters; Canadian vessels assisted in the patrol of the Atlantic and Pacific seaboards; ships of the Royal Indian Marine took part in the Eastern campaigns and were present at the defence of the Suez Canal. With the return of peace naval enthusiasm in the Dominions perceptibly cooled. One and all had made heavy sacrifices in blood and treasure, and there was a natural reluctance to undertake fresh obligations of which the urgent necessity remained to be proved.

In 1919 Lord Jellicoe was sent on a mission to determine the future naval needs of the Empire. His subsequent report recommended the formation of a Far Eastern Fleet, to consist of sixteen capital ships, with an appropriate quota of smaller craft. This project was framed to meet the new strategic situation brought about by the sudden expansion of American and Japanese naval power in the Pacific, where the Empire has vital interests. The Fleet proposed by Lord Jellicoe would have entailed an annual maintenance charge of nearly £20,000,000, of which sum the Dominions were expected to contribute three-fifths. It soon became evident, however, that they were not prepared to commit themselves to this far-reaching project without further consideration. Before any decision could be reached the scheme was killed by the Washington Conference, which, by drastically reducing the American and Japanese

navies, had so far eased the Pacific situation that the presence of a large British fleet in the Far East was no longer required. The whole question of Empire sea defence was thus left in the air, and even now it can hardly be said that a definite policy is emerging.

In treating of this subject it will be convenient to deal with each Dominion in turn, prefacing the study with a brief review of the strategic needs of the Empire as a unit. The Empire itself was defined by the late Admiral P. H. Colomb as "a living organism whose parts are all interdependent and highly sensitive in their relations. A stab at the heart may put it to death more suddenly, but perhaps not more surely, than the severing of a remote artery or the wounding of a nerve centre." The aptness of this definition under modern circumstances is disputed by some authorities, yet it would not be easy to supply a better one. True, the military defeat of Great Britain would not of necessity involve the subjugation of her Dominions, nor on the other hand would the conquest or the secession of one or other of the Dominions necessarily cause the ruin of Great Britain; yet either contingency would be fatal to the existence of the Empire as such. It was their determination at all costs to preserve the integrity of the Empire that impelled the Oversea States to contribute close upon 3,000,000 troops to the Imperial forces in the Great War.

Co-operative defence of the Empire in the period preceding the war was facilitated by the recognition of a definite menace. For at least ten years the aims of German policy had been too obvious to admit of misconception. The phenomenal growth of the High Sea Fleet, the studied truculence of German foreign policy, and the gradual reinforcement of German naval squadrons in distant waters were danger signs not to be ignored. Long before the actual crisis occurred it was well understood in the Dominions, not only that Germany meditated a breach of the peace, but that her attack, when it came, would almost certainly be

extended to outlying portions of the British Empire. With this tangible menace looming over them they needed little persuasion to do their part in the common task of defence. But with the crushing defeat of Germany and her reduction to naval insignificance the gravest danger that had ever threatened the Empire passed away.

It is true that Japan's naval activities, coupled with her forward policy in Eastern Asia, had begun to cause anxiety in Australia and New Zealand. But to the rest of the Empire no potential enemy was visible. Even in Great Britain the Admiralty's policy of treating the Pacific as the main strategic zone of the future did not escape criticism. It was suggested that an artificial " menace " was being manufactured to afford a pretext for maintaining the Navy at a needlessly high standard of strength.

In Canada there was almost complete apathy on the subject of naval defence. Lord Jellicoe's report on Canadian naval requirements was presented to the House of Commons at Ottawa on March 10, 1920. It contained alternative suggestions, one being that Canada should maintain a Fleet unit comprising a battle-cruiser, two light cruisers, six destroyers, four submarines, and two minesweepers, which would worthily represent the Dominion in the new Pacific Fleet. If, however, the defence of Canadian ports were the sole object in view, it would be sufficient to provide three cruisers, thirteen destroyers, and eight submarines. Lord Jellicoe urged the necessity of keeping the naval service outside the range of party politics, and recommended that the British plan of administration, which had stood the test of time, should to a great extent be followed.

While it was not expected that Canada would accept either of these suggestions in its entirety, particularly as the Government then in power was pledged to strict economy, few were prepared for the dramatic sequel that occurred only twelve days after Lord Jellicoe's report

had been submitted. On March 22 it was announced that the Minister of Marine had ordered the demobilisation of the Canadian naval forces, with the exception of 500 men belonging to the Naval College; further, that the naval dockyards at Halifax and Esquimault were to be dismantled, the organisations at those ports to be disbanded, and the cruisers Niobe and Rainbow to be sold.

The motives for this drastic action were explained by Mr. Ballantyne, the Minister of Marine, in a statement to Parliament on March 25, the substance of which was as follows: "The Government has had under consideration for some time the question of Canadian naval defence and the suggestions of Lord Jellicoe. In view of Canada's heavy financial commitments and the fact that Great Britain has not decided her permanent naval policy, and of the approaching Imperial Conference at which the question of Empire naval defence will come up for discussion between the Home Government and the Overseas Dominions, it has been decided to defer in the meantime action in regard to the framing of a permanent Canadian naval policy. The Government has decided to carry on the naval service along pre-war lines, and has accepted an offer by Great Britain of one light cruiser and two destroyers to take the place of the present obsolete and useless training-ships Niobe and Rainbow. The Minister, in order to be free thoroughly to reorganise and place the present service upon an economical basis, has issued orders for the demobilisation of all officers and naval ratings, and for the discontinuance of civilian help at headquarters and at the naval dockyards at Esquimault and Halifax."

The implied promise that Canada would adopt a definite naval policy when the maritime needs of the Empire could be more clearly foreseen has since been fulfilled, albeit in a negative sense. The light cruiser (Aurora) and the two destroyers (Patrician and Patriot) duly arrived from England, but the former was soon

paid off and relegated to the charge of caretakers. Since 1922 the Royal Canadian Navy has consisted of two destroyers, four armed trawlers, a motor launch, and a schooner. It is understood that some of these vessels occasionally go to sea, but even if all are kept fully manned and commissioned they cannot be said to represent an imposing force, nor one likely to deter an enemy from molesting Canada's seaboard or shipping.

The Conservative party has vigorously protested against this virtual abolition of naval defence, though it is handicapped by its own record of non-achievement in that sphere. In his indictment of Liberal defence policy Mr. Meighen, the former Conservative leader, declared that Canada was shirking her responsibility for the defence of the Empire, and that it was wholly unfair to leave the weight of naval defence on the shoulders of British taxpayers. "This Dominion," he said, "has a moral obligation which cannot be discharged upon the basis of the Government's programme. The policy in view will put us in the position of free boarders within the Empire by refusing to do what we, as an autonomous nation within the Empire, ought to do. If we are going to adopt this policy, or do not want to do something of real value, let us do nothing at all. Do not let us pretend to discharge our obligation. If the majority of the people of this country desire such a course, then in the name of honour and decency let us step outside the pale of the British Empire altogether." Such protests were so far effectual that the Government's original decision to scrap the Aurora and the two destroyers was reversed, the destroyers being retained in commission. In November, 1922, the Militia, Navy, and Air services were amalgamated in one department under the Minister of Defence, the Navy being administered by an officer known as the Director of Naval Service.

The population of Canada in 1926 numbered

9,364,200. Her naval expenditure in that year amounted to 1,400,000 dols., which works out at the rate of 15 cents, or 7½*d.*, per head. Her total import and export trade reached 1,865,999,890 dols., the amount spent on naval defence for every 1000 dols. of such trade being 75 cents, or 3*s.* In the same year the people of the United Kingdom were spending £1 6*s.* 10*d.* per head on naval defence, the ratio of such expenditure to seaborne trade being thirty-five times higher than the Canadian figure. This extraordinary discrepancy between British and Canadian provision for sea defence is only to be explained on the assumption that Canada considers herself practically immune from naval attack. Yet as a member of the Empire she is obviously exposed to the same risk of aggression as every other member, including Great Britain herself, who regards that risk as serious enough to warrant the maintenance of a powerful fleet. Canada, however, may be relying on the Monroe Doctrine as a safeguard against foreign aggression. That the United States would intervene if Canada were menaced with invasion is more than probable.

But the comfortable theory that mere proximity to a powerful and friendly neighbour renders her safe from every form of attack is difficult to reconcile with recent experience. During the period of American neutrality in the Great War German cruisers or submarines might have visited Canadian waters to bombard the coast and raid local shipping. Thanks to the British Navy this did not happen, so that what the United States might have done in such a contingency remains a matter of surmise. It may be recalled, however, that when a German submarine appeared off the United States coast in 1916, and destroyed four British and two neutral merchantmen just outside American territorial waters, the American warships on the scene did not interfere. They had, of course, no reason to do so, the United States being neutral at the time; but the incident points a moral

which Canada would do well to ponder. Nor should it be forgotten that Canadian merchant ships were sunk and many valuable Canadian cargoes destroyed by enemy action before the United States entered the war. In the light of these facts there appear to be no grounds for the supposition that Canadian maritime interests derive any protection from the Monroe Doctrine. They owe their security to the British Navy, Canada herself not having seen fit to provide a force even for the local defence of her harbours. In time, no doubt, her people will perceive the anomaly of the situation and undertake a larger share of the common burden of defence. At present, however, Canada is a negligible quantity in the naval organisation of the Empire.

To Australia, with her enormous length of coastline and her dependence upon sea communications, the supreme importance of naval defence has long been manifest. From the strategic point of view she might be a widely scattered group of islands instead of a vast Continent. The bulk of her scanty population is domiciled along the seaboard, where all the principal towns are situated, and owing to differences in railway gauge most of the commercial traffic between these centres is by way of the sea. An interruption of such traffic through any cause would have immediate and dire effects on the life of the whole community. While the blockade of 12,000 miles of coastline would, of course, be out of the question, a strong naval adversary could paralyse Australia's coastwise and overseas trade merely by patrolling the approaches to her chief ports. It would be of no avail to divert shipping to other harbours, since the inadequate means of inland transport would render the effective distribution of supplies impracticable. It will therefore be seen that Australia is peculiarly vulnerable to the weapon of sea power.

The fact was first brought home to her people by the recurrent war scares of the 'seventies and 'eighties,

when the threat of raids by Russian cruisers spread alarm along the coast. It led to a demand for increased naval protection, the outcome of which was the reinforcement of the British squadron in Australasian waters by a special group of five cruisers, to the maintenance of which Australia and New Zealand jointly contributed an annual sum. At a later date Germany's acquisition of Pacific territory within easy reach of the Australian coast provided a strong argument for the establishment of a permanent naval force under Australia's own control.

In 1910 Admiral Sir Reginald Henderson was invited by the Government of the Commonwealth to advise them with regard to future naval policy. He recommended that the Australian fleet be developed by gradual stages to a strength of fifty-two combatant ships, the last of which, however, would not be completed until 1933. He also urged the construction of a series of naval bases which would enable the fleet to operate in full strength at any point round the coast. The fleet itself was ultimately to be organised in two divisions—an Eastern Division stationed at Sydney and a Western Division at Fremantle (Cockburn Sound), their respective cruising grounds being defined by a line drawn from Cape York, Queensland, to Melbourne. Secondary naval bases were to be constructed at Hobart, Beauty Point, Westernport (near Melbourne), Port Lincoln, Albany, Cone Bay (on the north-west coast), Port Darwin, Thursday Island, Townsville, Brisbane, and Port Stephens. Special emphasis was laid in the report on the strategic value of Port Darwin. The whole programme, involving an estimated capital outlay of more than £38,000,000, was accepted in principle, and had not the Great War intervened it would probably have been carried out in a more or less modified form.

On the outbreak of war in 1914 the Commonwealth Government immediately placed its entire naval forces at the disposal of the British Admiralty. Their

splendid record in many seas is a matter of history. The first and most important service on which they were employed was the clearing of the Pacific traffic routes of enemy raiders. While engaged on military convoy duty the Sydney had the good fortune to destroy the notorious German corsair, Emden. In 1919 the Australian Navy, despite war casualties, had attained formidable dimensions, thanks to a gift of ships from the British Government. It consisted at that date of one battle-cruiser, five light cruisers, one flotilla leader, eleven destroyers, six submarines, three sloops, and various depot ships, the whole force numbering thirty-three units. But the upkeep of this comparatively large fleet made heavy inroads on the Australian Treasury, and it was not long before a demand arose for retrenchment. Under pressure the Government was compelled in 1922 to place no less than twenty ships out of commission, including the battle-cruiser Australia (which had been condemned by the Washington Treaty) and the six modern submarines presented by the British authorities three years previously. This action was ostensibly due to the Washington Conference, the results of which, it was argued, justified a more limited outlay on defence; but the real motive appears to have been a desire to weaken and overthrow the administration then in office.

The fact that Australia began to dismantle her navy at the very moment when Great Britain, mainly in deference to Australian opinion, was preparing to create a new and costly naval base at Singapore, naturally aroused comment in both countries. It was well known that the discussion on naval defence at the Imperial Conference in 1921 had centred almost entirely on the Pacific problem, and that Australasian delegates had strongly advocated the formation of a Far Eastern Fleet, to be stationed either at a new base in New Guinea or at Singapore. To this proposal the Home Government had agreed, on the implied

condition that Australia and New Zealand would each bear a proportionate share of the cost. Yet it now seemed as if Australia had suddenly lost interest in her naval defence, and was content to leave the entire responsibility on Great Britain's shoulders.

The sweeping reduction of the navy did not meet with general approval, and many of his compatriots welcomed the plain speaking of the late Rear-Admiral Dumaresq, a native-born Australian, when he relinquished command of the Australian Fleet in April, 1922. Addressing a group of Press representatives the Admiral said : " I have come to the conclusion that Australia, being a young country, feels obliged to spend all her available ready money and borrowed money on internal developments. On arrival in England I shall not feel able to explain why Australia cannot pay the same amount *per capita* as people at home. Since Australia has come of age as a nation and signed most important treaties she cannot, in my opinion, avoid the obligation to subscribe her full share towards Empire naval defence. Australia could have a unit in the Imperial Navy equal in efficiency to any other unit, subject above all to continuity of policy for training officers and men, and for maintenance and material. If the total sum spent by Australians in racing and other sports were assessed, it would amount to many times more than the cost of maintaining an efficient Australian Fleet." Later in the same year Commodore Addison, who had succeeded Admiral Dumaresq, declared that if the Fleet unit were further reduced, Australia might as well " throw up the game." At the time these protests were made Australian naval expenditure had declined to a *per capita* sum of 9*s*., or exactly one-third of the British rate.

But the Commonwealth's apathy in relation to naval defence was short-lived. In the spring of 1924 the British Labour Cabinet's decision not to proceed with the Singapore scheme aroused consternation in

Australia. Her people, however, realised the inconsistency of blaming Great Britain for her action in this matter when they themselves, although professing concern for their future safety, had effected such large reductions in their armed forces. When the decision to abandon Singapore was announced Great Britain's expenditure on defence stood at £131,601,000, compared with an Australian total of £3,426,000. Six months previously the Commonwealth Prime Minister, when in London for the Imperial Conference, had stated that his Government could not yet afford to replace its obsolete cruisers with modern ships. But the suspension of the works at Singapore had an immediate and a salutary effect on Australian opinion. It was decided to proceed at once with the renovation of the Navy, and in June, 1924, the Government introduced its new defence programme.

This embraced the construction of two cruisers and two patrol submarines, the establishment of a fuelling base at Port Darwin, and seaplane bases at Sydney and other ports. The original intention was to have one cruiser built in Australia and the other in Great Britain, but subsequently, for reasons of economy, both vessels were ordered from a British firm, Messrs. John Brown & Co., of Clydebank. In defending this policy Mr. Bruce, the Prime Minister, stated that to have had one ship built in Australia would have added from 68 to 106 per cent. to the cost. Only 15 per cent. of domestic material could have been used in the work, since Australia did not manufacture armour-plate, guns, or other essential items of naval equipment. The contract for the two submarines was likewise placed with a British yard, Messrs. Vickers, Ltd., the reason in this case being that the work was of a highly specialised nature, and also because it was doubtful whether, in view of the secrecy of the plans, the Admiralty would agree to Australian construction. The cost of the cruisers was to be £4,500,000, and that of the two submarines £716,000. The sum of

£800,000 which it was estimated would be saved by placing the orders in Great Britain was set aside for the building in Australia of an aircraft-carrier. Thus the total expenditure on new ships will amount to £6,016,000.

According to present plans, two additional cruisers are to be built in each subsequent triennial period. The cruisers are replicas of the British "County" class, displacing 10,000 tons, with an armament of eight 8-in. guns; the submarines resemble the British "O" type and are designed for a cruising radius of 3000 miles. Particulars of the naval works in hand at Port Darwin are not available, but it is understood that they include the provision of oil tanks and certain other facilities for the replenishment of a fleet. Owing to these new commitments Australian expenditure on naval defence shows a substantial increase. While the British Labour Government's action with regard to Singapore was the principal factor in reviving Australian naval interest, the visit of the British Special Service Squadron in the spring of 1924 did much to inspire local enthusiasm.

New Zealand's naval problem is in all essentials akin to that of Australia. She is equally dependent on sea power for the security of her shores and her trade. It is true that she is more remote from foreign naval bases, and to that degree less liable to be attacked, yet strategically her interests are inseparable from those of Australia. New Zealand's share in the naval defence of the Empire is limited at present to the maintenance of two British cruisers, together with a depôt ship at Auckland and two sloops, the whole constituting the New Zealand Division under the command of a Commodore, R.N. The Naval Defence Report presented to Parliament in 1923 stated that the foundations had been laid for the expansion of the sea-going squadron to three cruisers, a submarine unit, and an oil tanker as soon as financial conditions permitted. An oil-fuel station has been

established at Auckland, and the provision of similar facilities at other ports is contemplated. Further, a cash contribution has been made to the Singapore fund.

It cannot be said, however, that New Zealand is bearing her fair share of the common burden of defence. For several years past her naval expenditure *per capita* has stood at 8*s.*, and for every £1000 of her great volume of seaborne trade—amounting in 1926 to £108,000,000—she is spending only £5 on naval protection. Yet New Zealand, like Australia, was profoundly disturbed at the prospect of the Singapore base scheme being abandoned. "We attach great importance to the development of the base," said an official memorandum, "our opinion being founded mainly on grounds of naval strategy. While laying stress on the view that it is for defensive and not offensive purposes, we feel that the British Empire in the future will be endangered should our naval ships be unable to operate in these waters, and that the time has not yet come to rely solely on the influence for peace of the League of Nations." In other words, it is to the British Navy that New Zealand looks for security, yet to the upkeep of that Navy her people are contributing only 8*s.* per head as against the £1 6*s.* 10*d.* which their kinsmen in Great Britain pay.

The importance of naval defence to South Africa was acknowledged by a prominent statesman of the Union shortly before the war. "If to-morrow there were no British Navy," he declared, "the liberty of Canada and Australia would be in danger, and the liberty of South Africa even more so, because of the important strategic position we occupy on the great trade route to the East. South Africa would be unable to hold its own if an enemy had possession of its ports. It is therefore right that the great question of the British Navy should affect us living in South Africa." A project entertained in 1912 for building six cruisers at the charge of the Union failed to mature,

and before any definite naval policy had been framed the Great War broke out. For some months South Africa lay under the threat of attack from the sea. The German squadron under Admiral von Spee was then at large, and after his victory at Coronel there seemed a strong probability that the German admiral, casting about for a vulnerable point at which to strike a fresh blow, would select South African waters, where the bases of the Union expeditionary force operating against German territory, or perhaps even Cape Town itself, offered promising objectives. So serious a view of the danger was taken that the British squadron at the Cape remained concentrated in Table Bay until the German force had been found and destroyed.

This object-lesson in the value of naval defence does not appear to have produced a lasting impression. The South African Union to-day possesses no sea-going ships of war, nor does it seem disposed to expand the tiny organisation which does duty as a "Naval Service." Responsibility for the protection both of the Union itself and its floating trade is left, as before, entirely to Great Britain. The *per capita* rate of naval expenditure in South Africa is 1*s.* 9*d.*, while the premium paid for naval insurance on her £150,000,000 of seaborne commerce amounts to only 18*s.* 10*d.* per £1000.

India has for many years past maintained a fleet of armed transports and patrol vessels, constituting the Royal Indian Marine. Besides paying about £350,000 a year for the upkeep of this fleet, which has little or no military value, she contributes £100,000 annually towards the maintenance of an East Indies Squadron of the British Navy. In February, 1926, however, an important change in the character of the Indian sea service was foreshadowed in the following terms: "Subject to the necessary legislation, it has been decided to reconstruct the Royal Indian Marine as a combatant force, to enable India to enter upon the

first stage of her naval development, and ultimately to undertake her own naval defence. Subject to his Majesty's approval, the service will be known as the Royal Indian Navy, and will fly the White Ensign." In addition to the functions hitherto discharged by the Marine, the new Navy is to undertake the training of *personnel* for service in war and the organisation of naval defences at ports which are under the control of the Indian Government. It is to consist at first of four sloops, two patrol craft, four trawlers, two survey ships, and one depôt ship. Indians are eligible for commissions, though for the present only one vacancy a year is open to them. In time to come the Royal Indian Navy may represent no insignificant factor in the defence of the Empire.

The geographical position of India herself is such as to invest any local naval force with unusual strategic value. In time of war the control of the Indian Ocean would be essential to the safety of Imperial communications, while the defence of India's extensive coastline, with its numerous and wealthy ports, alone would justify the upkeep of an adequate local squadron. Politically, too, the creation of the Royal Indian Navy is a wise move, for as Professor Rushbrook Williams observed in his survey of *India in 1924–25*, "the national aspirations of the educated classes, as voiced in the Legislative Assembly, are tending steadily towards the formulation of a policy which will secure for India a future upon the seas."

That an Irish fleet unit may eventually come into being is not beyond the bounds of possibility. An article of the Irish Treaty empowers the Free State Government to construct and maintain such vessels as may be required for revenue and fishery protection service, but for a period of five years from the date of the Treaty the coastal defence of Ireland was to be undertaken by the Imperial forces. At the end of that period the situation was to be reviewed at a conference of British and Irish Government representatives,

with a view to Ireland's taking over a share of her own coastal defence. It was further provided that a settlement should at the same time be reached as to the future of Spike Island, off the coast of Cork, and Lough Swilly, in Donegal. It is not known at the time of writing what decisions, if any, have been come to on these questions. Clearly, however, the Irish Free State is not yet financially capable of supporting a naval unit of any consequence, nor is the matter one of pressing importance.

Of far greater moment is the future status of such harbours as Queenstown, Lough Swilly, and Berehaven. The free use of these and other Irish harbours for British naval purposes would be absolutely essential in case of war with a Great Power. In the British Government's proposals for Irish peace in August, 1920, the following passage occurred : " Great Britain lives by sea-borne food; her communications depend upon the freedom of the great sea routes. Ireland lies at Britain's side across the sea-ways north and south that link her with the sister nations of the Empire, the markets of the world, and the vital sources of her food supply. In recognition of this fact, which Nature has imposed and no statesmanship can change, it is essential that the Royal Navy alone should control the seas around Ireland and Great Britain." Such control, to be effective, would involve the unrestricted use of Irish harbours in war time by vessels of the Royal Navy. As the settlement of this question necessarily depends on the future political relations of the two countries, it need not be pursued here. It should, however, be pointed out that the development of aircraft may compel us, in the event of war with a major Continental Power, to transfer the main fleet to a base on the Irish coast, where it would lie beyond reach of air attack. This possibility renders it the more desirable that a clear understanding should be reached as to the part which Irish Free State harbours are to play in future naval strategy.

Small satisfaction is to be derived from the foregoing summary of the Empire's naval resources. That they are sufficient for present requirements is due, first, to the absence of visible menace at sea, and secondly to the fact that Great Britain continues tacitly to relieve her daughter States of the greater part of their responsibility for the defence of the family heritage. Expressed in terms of cash, the position in 1926 was that the 45,000,000 people of the Motherland were contributing £60,500,000 to the common naval fund, while the collective payments of the four principal Oversea Dominions, with a total population of 18,300,000, amounted to no more than £7,400,000. These figures show how unequally the burden is distributed. Australia is at present the only Dominion that exhibits any willingness to enlarge its naval commitments. Yet the fundamental principle of Imperial defence, that since all the autonomous States of the Empire have an equal interest in the maintenance of adequate naval power their respective contributions should be on a uniform *per capita* scale, has always been accepted by the Dominions. This principle, however, has never yet been translated into practice, and there is no indication that it will be in the near future.

The time-honoured argument that the Dominions need all their surplus wealth for internal development, and should not be expected to pay for defence at the same rate as the Mother Country, loses much of its force when we compare the present financial and social situation of Great Britain with that of her daughter States. That the average standard of living is higher in the Dominions than at home admits of no question, nor is it to be doubted that their inhabitants are individually at least as prosperous as their kindred in Great Britain. Every canon of reason and equity thus enjoins them to take over a fair share of the burden which the Mother Country, almost unaided, has borne for so long. Until they do this there must

always be something unreal in discussions on "Imperial naval policy." Elaborate memoranda have been penned, setting forth the functions of the various Dominion fleet units in peace and war, yet the blunt truth remains that if war were to break out at any time during the next few years the Dominions would be unable to muster more than a brace of effective cruisers between them. Practically the entire task of defending the territories and trade routes of the Empire would fall upon the Royal Navy, created and maintained at the charge of British taxpayers.

Neither Canada, Australia, New Zealand, nor South Africa could offer any serious resistance to heavy naval attack. Their cities might be bombarded or held to ransom, their merchant ships sent to the bottom, and their trade completely ruined, for all the protection their local fleet units afford. They do not fear such disasters, because they know that the first threat of aggression would bring the British fleet hot-foot to the scene, and because that knowledge is shared by foreign Powers who might otherwise be tempted to lay violent hands on these rich but thinly-peopled and defenceless territories.

A Dominion statesman recently described Singapore as "a symbol of Imperial unity in peace and war, the headquarters of a great Imperial Fleet which is to preserve the integrity of the British Commonwealth and uphold its prestige in the mightiest ocean of the world." To analyse this fine-sounding phrase might be unfair, yet the implication it bears is notoriously at variance with the facts. If a great fleet is to be stationed at Singapore there is little doubt that it will consist in the main of ships of the Royal Navy; unless, of course, the Dominions should in the meantime decide to build up fleet units of real fighting power in place of their present sea forces, which are of negligible combatant value and only useful for training purposes.

In the following table the strength of the Royal

and Dominion naval forces at the end of 1926 is compared :

	Royal Navy. Great Britain.	Dominions (Canada, Australia, New Zealand, South Africa).
Capital ships	20	0
Cruisers	41	6
Aircraft-carriers . . .	6	0
Flotilla leaders and Destroyers.	162	14
Submarines	58	0
	287	20
Building :		
Cruisers	12	2
Submarines	7	2
Totals	306	24

CHAPTER V

IMPERIAL STRATEGY: SINGAPORE IN A NEW LIGHT

The motives that prompted a reorientation of British naval policy after the war were briefly outlined in a preceding chapter. The German fleet had disappeared, and with it the menace of invasion which had kept the major part of our Navy tethered to its home bases for many years past. But if war experience had shown this particular danger to have been unduly magnified, it amply confirmed the forebodings of those who had always maintained that our reliance on imported commodities laid us open to a more insidious and equally deadly form of assault. Authorities on naval strategy, such as Mahan and the brothers Colomb, had never admitted that attacks on an adversary's seaborne trade could produce decisive results unless accompanied by telling blows at his regular naval forces. That was certainly the teaching of naval history previous to the late war, though it came near to being falsified by the effects of the German submarine campaign.

British naval strategy has so far been influenced by war experience that it is now directed chiefly towards ensuring the safety of the trade routes, rather than to the attainment of local supremacy in any quarter of the globe. Each week about six million tons of food and twenty million tons of raw material are brought into the United Kingdom. To maintain this gigantic volume of trade 1400 British merchant vessels of 3000 tons and over are every day at sea, while at the same time 1400 other British ships are loading or discharging in ports all over the world.

The sea lanes regularly traversed by British shipping have a total length of 80,000 miles. Of the four main arteries along which this gigantic flow of traffic proceeds, the Eastern one is by far the most difficult to defend. It leads through the Mediterranean and the Suez Canal into the Indian Ocean, where the volume of shipping divides, one stream going to the China Seas and the other to Australia and New Zealand. As far as the Suez Canal this route is rendered nominally secure by the presence of powerful British forces in the Mediterranean, but eastward of Suez the means of protection are scanty, being limited at present to cruiser squadrons in the East Indies and China, the small Australian Navy, and two cruisers on the New Zealand station.

It has been computed by the Trade Department of the Admiralty that upon any given day of the year the total value of British trade—hulls and cargoes—afloat within the Indian area is £81,000,000, within the Australian area £50,000,000, and within the China area £26,000,000. The percentage of total imports to the United Kingdom from these combined areas are: tea, 97; jute, 97; zinc ore, 96; rubber, 90; wool, 89; nitrate of soda, 86; hemp, 77; manganese ore, 76; tin ore, 71; rice, 63; cheese and butter, 50. Further, a large proportion of the frozen meat supply, oils for food and industrial purposes, and 25 per cent. of imported petrol are derived from the areas in question.

To ensure the effective control of this vast and indispensable volume of trade the existence of a first-class naval base at Singapore is held by the present Board of Admiralty to be essential. The establishment of such a base was foreshadowed for the first time in 1921, though definite action was not taken till two years later. Speaking on the Navy Estimates in March, 1923, the First Lord of the Admiralty said: "We are beginning the creation at Singapore of a naval base capable of dealing with the requirements

of a fleet of modern capital ships. At present there is no dock in British territory in the Far East capable of taking a capital ship. The ultimate cost of equipping Singapore will be £11,000,000, but it will be spread over many years." Although trade protection was urged as the principal reason for the new base, it was made clear that the defence requirements of Australia and New Zealand furnished an equally strong motive for the plan, if indeed they had not dictated it from the first. It was launched in the teeth of determined opposition from Liberal and Labour spokesmen, who jointly condemned the scheme on the ground that it specified Japan as a potential enemy, since from no other source in the East could a naval menace develop.

In view of the Labour attitude no surprise was occasioned when that party's accession to office early in 1924 was followed by the announcement that the new base would not be proceeded with. Correspondence which had passed between the Home and Dominion Governments on this question was read in Parliament. It appeared that Australia and New Zealand attached great importance to the completion of the base; South Africa opposed it as being inimical to the cause of peace; Canada and the Irish Free State preferred not to express any views, and Indian opinion was indefinite. Upon the return of the Conservative party to power the scheme was at once revived, operations being resumed in March, 1925. "Beyond some waste of time, material, and money," wrote *The Times*, "the recent interruption has not had serious consequences. The work can be taken up where it was left."

It is patent to all who have studied the Singapore project that the issues involved are weighty and far-reaching, affecting not only the strategy of the British Navy but our future relations with Japan, and therefore the political situation throughout the East. It is, in fact, a question of high policy rather than one

of naval strategy alone. The sponsors of the scheme do not admit that Japan has any cause to regard the new base with apprehension. They point to its remoteness from Japan (2890 miles) as proof that it could never be used as a base for offensive operations against that country, though this argument is somewhat weakened by the fact that the distance from Singapore to Formosa, an integral part of the Japanese Empire, is only 1625 miles. It is in any case futile to pretend that naval preparations at the gateway of the Pacific have no direct reference to Japan. Though Singapore may be too far away to serve as a base of attack, it is ideally situated as a strategic centre from which to dominate Japan's sea communications—other than with the Asiatic Continent—and subject her to distant blockade. This is the point upon which Japanese critics constantly dwell, nor is it possible to rebut their argument.

That our manifold interests in the Pacific require adequate defence is not to be disputed. Since our present naval squadrons in the East would not be capable of holding their own in the event of war with Japan, no one can justly complain if we provide the requisite facilities for reinforcing them with capital ships in case of need. Under present conditions it would not be safe to despatch capital ships to the Pacific, where there are no docks ready to receive them. The addition of anti-torpedo bulges to battleships and battle-cruisers has so enlarged their breadth that they cannot enter docks built to take the earlier Dreadnoughts, such as already exist at Singapore, Sydney, Fremantle, and Hong-kong. Yet unless a warship is periodically docked to have the hull cleaned and repaired it loses speed and becomes inefficient. Docking facilities for the largest battleships must therefore be provided in the Pacific area if British interests in that region are not to be left unguarded.

It does not follow, however, that the construction

of a new base of such magnitude as the one projected at Singapore is either necessary or prudent. Since the scheme was first mooted in 1921 the naval situation in the Pacific has undergone a complete change. Japan at that time was building an immense fleet, avowedly designed to maintain the balance of power against the United States, whose own naval preparations were on an equally lavish scale. These two nations were, in fact, more or less openly building against each other, and since the prize at stake was the control of the Pacific, where British interests are extensive and vital, it was not possible for this country to look on with indifference. An armed clash between America and Japan seemed by no means improbable, and in view of this contingency it was the part of wisdom to take measures for safeguarding our neutrality. Hence the decision to provide a base in or near the Pacific where a British battle fleet could find supplies and dock accommodation.

But with the negotiation of the Washington treaties in 1922 the situation was entirely altered. So far as Dreadnoughts were concerned, competitive building ceased; the American and Japanese battle fleets were reduced to eighteen and ten ships respectively, the insular naval bases they were preparing in the Western Pacific were not proceeded with, and the danger of war receded into the background. Having regard to the altered circumstances it was widely assumed that the Singapore scheme would either be given up or drastically modified, since the necessity of maintaining a great British battle fleet in those waters had passed, and with it the need of an elaborate base at Singapore or elsewhere within the Pacific zone. This expectation was not fulfilled. So far as public knowledge goes, the original plan has been adhered to in every respect. Apparently, therefore, the intention of stationing a large battle fleet in the Pacific still persists, for if it did not the provision of the new base would be superfluous.

Yet the peril against which this battle fleet is to shield the Empire is not readily discerned. The corresponding Japanese force now numbers only ten ships, half of which are semi-obsolete. After the year 1934 the operation of the Washington Treaty will automatically reduce it to nine ships, nor can that total be exceeded while the Treaty remains valid. It is true that the Japanese Navy is strong in cruisers, destroyers, and submarines, but battleships are not required to fight such craft, and Singapore is, it would seem, to be primarily a battleship base. The Treaty is to remain in force until the end of 1936, and it will continue to be valid for an indefinite period after that date unless denounced by one of the signatory Powers. The decision to complete the Singapore base would be justified if there were reason to anticipate an early denunciation of the Treaty and the resumption of battleship construction by Japan among other Powers. So far, however, there is no indication of such a development.

That Japan herself will ever take the initiative in cancelling an agreement from which she has derived great advantage is exceedingly doubtful. Under its terms she is free to lay down a new capital ship every year from 1931 inclusive. But each of these new ships will displace an older vessel, so that the numerical strength of the battle fleet will not be increased. Even if the Treaty were abrogated, the state of her finances would hardly permit her to build unlimited battleships at a cost of £8,000,000 or £10,000,000 per ship.

The subject of Japan's fleet and her naval policy in general is considered elsewhere. Here it suffices to remark that the present organisation of the fleet and the character of the new shipbuilding now in hand are such as to make it certain that the Japanese Navy is maintained primarily for local defence. As we have seen, it contains no more than ten capital ships, only two of which represent post-Jutland

design. Four of the ten ships are battle-cruisers about equal in fighting value to H.M.S. Tiger, and therefore verging on obsolescence. There are twenty-five modern cruisers built and building. Four of these are of 10,000 tons and four of 7100 tons, but the remaining seventeen ships are all under 6000 tons, and some are very much smaller. While the whole of these cruisers might conceivably be employed for raiding commerce, only the eight largest are adapted for oversea operations. Japan has, further, about 100 destroyers, which would be formidable only in her home seas. She will eventually have between seventy and eighty submarines.

Now while this fleet would be very dangerous to an enemy who sought to invade that north-western zone of the Pacific where Japan's interests are concentrated, it is scarcely the sort of fleet she would build if she contemplated a war of aggression overseas. Had that been her aim she would have demurred to the Washington Treaty, which has cut down the number of her battleships to ten, and will eventually reduce it to nine; nor would she now be limiting her new construction to types of which the majority are only suitable for local defence. It may be asserted without fear of contradiction that Japan's naval strength is mainly regional, and could not be exerted at any considerable distance from her own coasts. The converse is true of British naval strength.

Since Japan is the only naval Power in the Western Pacific, she assumes, logically enough, that the Singapore base has a direct reference to herself. It is the implication that she is now regarded as a possible enemy by Great Britain, her former ally, with whom she has always been on terms of friendship, that has angered Japan and moved her to protest. It is quite true, as her newspapers declare, that Japan has done nothing to warrant a suspicion that she harbours designs against the British Empire. She has made no demonstration against British interests

in Asia, nor does the trend of her naval or military policy accord with the theory that she meditates an invasion of British territory.

There are, indeed, several good reasons why Japan is never likely to undertake the conquest of Australia or New Zealand. One is that such an adventure would involve her in war with the whole British Empire, whose resources of every kind are immeasurably superior to her own. Such a war, as intelligent Japanese clearly perceive, could only end in the complete and overwhelming defeat of their country. Another and equally cogent reason is that the physical obstacles would be well-nigh insuperable. The distance from Japan to the northern coast of Australia is over 3000 miles, part of the route leading through waters which require very careful navigation. It would take a fast steamer seven days to make the voyage, and the Japanese merchant marine has few ships of great speed. During the Great War Australia put 417,000 troops into the field. It would therefore be madness for Japan to attempt the conquest of that country with an army of less than half a million. To transport an army of this size to a distant objective she would require at least 2,000,000 tons of shipping, or approximately fifty per cent. of her entire merchant tonnage. The withdrawal of so much tonnage for military purposes is out of the question, since it would paralyse the import trade, on the maintenance of which her existence in war would depend.

Assuming, however, that by some miraculous means this difficulty were overcome, other and equally formidable problems would remain. As the collective speed of the convoy, consisting mainly of slow ships, would not exceed 14 knots, the voyage would occupy at least a fortnight. The assembly and departure of such an armada could not be kept a secret. The fact that it had sailed would become known immediately, and before reaching its destination it would probably be challenged by a British

fleet comprising the China Squadron, the East Indies Squadron, the Australian ships and the New Zealand Division, numbering in all not less than a dozen cruisers with attendant destroyers and, perhaps, submarines and aircraft. To protect the convoy from attack Japan would have to detail the greater part of her fleet for escort duty, thus denuding her own waters of naval protection.

Meanwhile the main British battle fleet would be steaming eastward at full speed, and every available cruiser and submarine would be despatched to harass the line of communication, 3000 miles long, upon which the Japanese invading force had to rely for supplies and reinforcements. It is a stock argument that our battleships cannot operate in Australian waters owing to the absence of dock facilities, but the same is just as true of Japanese battleships. That Japan would risk her capital ships in a distant theatre of war where they would have no means of carrying out the smallest repairs is inconceivable. Naval operations are not conducted in this light-hearted fashion, and those who credit Japan with the design of invading Australia would do well to study the rudiments of sea strategy and logistics.

It is said, however, that the Australian public takes a serious view of the invasion peril, and that its concern on this score furnishes a sufficient reason for proceeding with the Singapore project. This argument is not easy to reconcile with Australia's own policy of defence. As we saw, she has reduced her fleet to skeleton proportions, and the army also has been drastically pruned. The figures of expenditure on naval and military defence which have already been given do not suggest that Australia is really apprehensive of invasion. When visiting that country in 1921 the late Lord Northcliffe, who told the people that they could "almost smell the East on their northern winds," complained that he had met "scarcely a score of men and women in Australia

with any sense of the imminent danger in which their country stands." It is just possible, however, that the other Australians whom Lord Northcliffe met had satisfied themselves that the danger to which he referred was less imminent than he supposed.

With regard to Australia's ability to defend herself from invasion, General Sir Ian Hamilton, than whom there is no more competent judge, has said : " When I inspected Singapore I had not seen the Anzacs fighting in Gallipoli. Remembering Manchuria, I saw visions of military expeditions sailing south, and had fears. Now I have no fears unless we ourselves fit out a half-way house (Singapore) and then—half-garrisoning it, as is our wont—make a present of it to the wrong people."

When the Singapore scheme was first heard of there was a general impression that nothing more was contemplated than an extension of the naval works which had existed at Keppel Harbour since 1882. The King's dock, owned by the Singapore Harbour Board, will take any cruiser and any unbulged battleship in the Navy. It was assumed either that this dock would be enlarged to take bulged battleships, if that were feasible, or that a floating dock of the requisite dimensions would be sent out. Had that been done the present base, which is well equipped as a fuel and supply station, would have sufficed for the needs of a battle squadron.

It soon became known, however, that a more elaborate scheme had been prepared, involving the construction of an entirely new dockyard at a point remote from Keppel Harbour. The site chosen was on the old Straits dividing the island from the Peninsula of Johore. According to a correspondent of the Calcutta *Statesman*, who visited the scene early in 1926, the situation seemed to the inexpert eye to " bristle with disadvantages." Nowhere is the channel more than two miles wide, and at its narrowest point it is only half a mile across. It has been

converted into a *cul de sac* by the building of a railway causeway from Singapore to the mainland, and the entrance is obstructed by an island round which there is shallow water. "Much of the soil in which the constructional works have to be carried out is recent alluvium, although where work has actually commenced there is granite very near the surface." Drainage operations, it was added, were going on in what was little better than a morass.

The original scheme, as communicated to Parliament, forecast an expenditure of £10,500,000, made up of the following items: (1) wharves, basins, railways, roads, dredging berth for the floating dock, £5,100,000; (2) graving dock, £1,000,000; (3) offices, dwellings, and other buildings, £420,000; (4) workshops, store-houses, magazines, £1,780,000; (5) contingencies, £1,200,000; (6) machinery, £1,100,000. It appears that the cost of the new base was underestimated. An additional £1,000,000 has since been ear-marked for the construction of a new floating dock, the ex-German structure which was to have been sent out to Singapore having been found unsuitable. Past experience teaches the fallacy of relying on estimates when large naval works are in contemplation. A signal instance of this was afforded by the Naval Works Act of 1895, providing for an outlay of £8,800,000. The actual cost mounted to £27,500,000, and while a considerable part of this increase was due to extensions of the initial programme, a very large proportion was represented by excess expenditure over the first estimates.

Lord Selborne, when First Lord of the Admiralty in 1903, made a vigorous protest against the policy of developing oversea naval bases and fortifications beyond the absolute minimum required. "Bricks and mortar," he wrote, "as applied to naval expenditure, are an evil, very often a necessary evil, but they are an evil. What we want are more ships, and every penny that is spent on bricks and mortar and land

fortifications which could be spent on more ships is money unnecessarily and badly spent. Every garrison that we have to lock up thousands of miles away from this country is an evil, very often a necessary evil, but an evil to be reduced to the smallest dimensions possible." It will have been noted that no provision for fortifications was made in the cost estimate for the Singapore base. The existing defences at Singapore are apparently of small value as a protection to the new dockyard, which is situated on the other side of the island. It will be necessary to construct new batteries, armed with heavy guns capable of dealing with warships and with anti-aircraft artillery. It will further be necessary to provide a garrison for the new forts.

On this subject Sir Ian Hamilton may again be quoted: "Japan could never have brought gigantic Russia to her knees had not M. Witte spent millions in equipping Dalny, which the garrison of Port Arthur was not strong enough to cover. Not one of the 11-in. howitzers which smashed the defences of Port Arthur could have been landed without the appliances at Dalny. Pearl Harbour (the American base at Hawaii), Lord Sydenham says, can easily be made impregnable. Port Arthur was 'impregnable'—until it was taken. Our main fleet is based on Malta, 6000 miles distant from Singapore, which again is 3000 miles distant from Japan, and, although no one mentions the fact, about half that distance from Formosa. If a post upon a line of communications passes nearer to some danger-point than the point from which it can be reinforced, it should either be lightly held or very strongly held. Singapore is very lightly held. What would render a fully-developed Singapore reasonably secure against a *coup de main* has been variously estimated. I should have put the necessary force myself at thrice the strength of the present garrison."

Were Japan, for some inscrutable reason, to make

up her mind to fight the British Empire, is it not likely that she would lay her plans for a sudden and overwhelming assault on Singapore, knowing that with this great fortress and naval dockyard reduced, the game, so far as strategy counted, would be largely in her hands? Compared with the invasion of Australia, the conquest of Singapore would be a simple operation. As a promising objective for the first great blow it might well prove irresistible. If Singapore, then, is to be converted into our naval key position in Eastern waters we must be prepared to provide it with the powerful defences which its importance demands. If we fail in this it may become a second Port Arthur.

The plan of strategy which the new base is to subserve is not easy to penetrate. From the magnitude of the scheme it would appear that the authors visualise the transfer to Pacific waters of the greater part of our battle fleet. A double graving-dock and a floating dock are to be provided, so that three of the largest battleships may be docked simultaneously. In proportion to its strength the Grand Fleet had fewer docks at its disposal during the Great War. This lavish provision of Dreadnought docks at a distant overseas base seems to go beyond actual requirements. Our battle fleet, as dimensioned by the Washington Treaty, consists of twenty ships. So long as the Treaty remains operative we may not increase that number. On the contrary, we are pledged to reduce it to eighteen ships in 1934, and to fifteen ships in 1936. If, therefore, the Treaty is to be renewed for a further term of years on its expiration at the end of 1936—and its advantages are so manifold and obvious that public opinion in the British Empire, the United States, and Japan will probably insist that it be so renewed—our fleet will be limited indefinitely to a total of fifteen capital ships.

On the assumption that all these fifteen ships may one day have to be despatched to the Pacific, the

provision of three Dreadnought docks at Singapore might be wise policy. But is it conceivable that the entire battle fleet would ever be sent to wage war at a distance of 8000 miles from England? With the battle fleet would have to go most of the cruisers, destroyers, and other satellites, without which no capital ships dare venture to sea. Evidently, therefore, the promoters of the Singapore scheme presuppose a situation which would compel us to transfer practically the entire Navy to the Pacific, leaving home waters, the Mediterranean, and other sea areas destitute of British warships. Even an amateur strategist would hesitate to commit himself to such an extraordinary forecast.

If the question were approached solely from the point of view of strategic expediency, a case might be made out for building a new base at Singapore, if not on the elaborate scale proposed. There are, however, occasions when the true interests of the Empire are better served by subordinating military demands to the higher claims of statesmanship. In view of the vital importance of the Mediterranean route we should be justified, on strategic grounds, in converting Malta into a naval fortress of the first rank, equipped with the most powerful defences, and making it the headquarters of a great fleet of submarines and aircraft. But since it is only too certain that such action would arouse the resentment of France and Italy, and compromise our relations with those Powers, no British Cabinet is in the least likely to sanction it. In the end our security would be prejudiced, rather than increased, by an ostentatious development of our chief Mediterranean base.

Of the bitter feeling which the Singapore scheme has excited in Japan there can be no question. Newspapers of every shade have condemned it, and continue to condemn it, in the severest terms. There is no doubt that the psychological effect on the Japanese people has been very marked. Mr. Bridge-

man, First Lord of the Admiralty, stated in March, 1925, that "no official in Japan has given voice to the idea that there is anything in the nature of an offence in this proposed base. On the contrary, Japanese official utterances have been quite the other way." Against this statement may be set a declaration by Count Uchida, the Japanese Foreign Minister, in July, 1923: "The Singapore project conflicts in many ways with the spirit of the Washington Treaty, but since it is a British internal affair Japan cannot interfere. There is nothing in Anglo-Japanese relations requiring such an extensive undertaking as the Singapore base." On the same date Admiral Takarabe, the Naval Minister, said publicly that "Japan must now look to her defences, since Singapore is only three days from Formosa." In the following April, when the Labour Government decided not to proceed with the scheme, Baron Matsui, who had succeeded Count Uchida as Foreign Minister, said to the Tokyo correspondent of *The Times*: "We are glad that the British Government has decided not to create a great naval base at Singapore. We know, of course, that such a base would not be designed in hostility to us, but, as we are not a potential enemy of Great Britain and as there is no other Eastern naval Power, the construction would be needless and would cause among some of us a feeling of regret and disappointment." The discretion habitually observed by Japanese statesmen in their public utterances lends a deeper significance to these protests.

The journal *Hochi* wrote in February, 1924, that the Singapore scheme would be interpreted by the Japanese people as an open challenge, and made an eloquent appeal for its abandonment "in the name of world peace." The *Jiji* wrote: "There is no denying the fact that the plan runs counter to the spirit of the Washington Conference, nor is there any doubt that it presupposes Japan as a potential enemy —a fact which is certainly disturbing to Anglo-

Japanese friendship." Mr. Moriyama Tatsue, the well-known publicist, names Singapore as one of the prime causes of a "war menace in the Pacific." Vice-Admiral Matsumura told the *Yomiuri* that "the most disagreeable thing he had noted recently was the ungrateful attitude of the British Navy towards the Japanese Navy, which rendered such valuable help to Britain in the Pacific, the Indian Ocean, the China Sea, and the Mediterranean during the war." The *Asahi* considers that the Singapore plan gives Japan cause to suspect British sincerity in regard to the maintenance of peace in the Pacific. Mr. Yukio Ozaki, Japan's veteran Liberal politician, has stated in the *Yamato* that "Japanese feeling towards Britain and America is indescribably bad. I have no desire," he added, "to sit in judgment on the British claim to extend the Singapore base, but I can safely say that this undertaking is calculated to vitiate international relations."

Count Michimasa Soeshima, a leading member of the House of Peers, writes of the Singapore scheme: "There is no need for such a project in the present state of world politics. Some people say that the underlying motive is Britain's fear of a Japanese invasion of Australia. This idea is absurd on the face of it. During the Great War the Japanese Navy assisted in the safe transport of 500,000 Australian soldiers to the European front. A million Japanese would be required to subdue Australia. The conveyance of a million troops would need transports and escorting warships in such number that the task would be virtually impossible. Not only is Australia too far away to make an aggressive campaign practicable, but there is the mighty British Navy to be taken into serious consideration. Had Japan ever had aggressive designs upon Australia, she would have carried them out during the war, when conditions would have been more auspicious for such a campaign than they are at present."

In a recent article the *Jiji* wrote: "The gravest blunder committed by the British Cabinet in its Far Eastern policy is the Singapore base programme. This project has sensibly cooled Japan's friendship for Britain, which was of long standing. It is beyond the Japanese comprehension why Britain must proceed to construct a great naval base with Japan as its objective, so soon after the abrogation of the Anglo-Japanese alliance." Mr. K. K. Kawakami, a distinguished writer on foreign politics, declares that the British Admiralty has, in effect, said to Japan: "You have been a most faithful ally and friend. Once you destroyed the Russian menace to our position in Persia and India. Later, you enabled us to remove all our battleships from the East and concentrate them in the North Sea. During the war your transports, escorted by your warships, brought the Australian troops to the front, and your destroyers helped to keep the Mediterranean route open in the face of German submarine operations. Now that your service is done we no longer desire your friendship. Not only that, but we regard you as our potential enemy, and are going to make our plans accordingly." In view of these representative opinions it is useless to disguise the fact that our relations with Japan are being adversely affected by the Singapore scheme.

If it could be proved that the new base was absolutely essential to the safety of the Empire, Japanese ill-will would have to be risked, serious as the consequences may be to our interests in the East. As yet, however, the necessity of the base has not been demonstrated. That docks for battleships must be provided somewhere within the Pacific area is clear enough, since without them the Fleet would be permanently barred from that ocean, and the knowledge that British naval power could not be brought to bear at any point east of the Red Sea would hardly make for the preservation of peace.

Because Singapore is a position of capital importance in relation to Pacific strategy it should certainly be provided with at least one dock capable of taking the largest men-of-war. The simplest plan would have been to send out a floating dock. If in addition the existing dry dock had been enlarged to take bulged battleships the work would have excited no comment, since all the world knew that Singapore had been for many years a British naval base.

The main objection to the present scheme, apart from its questionable expediency, is that it has focussed world-wide attention on our naval preparations in the East and given them, in Japanese eyes at least, an aggressive significance which they were never intended to bear. All urgent naval requirements in the Pacific would be met if the present establishment at Singapore were equipped with a new battleship dock and additional oil-tanks and magazines. If at the same time new docks were constructed at the principal Australian ports, the strategic mobility of the British fleet would be proportionately increased. All these things might be done without the slightest disturbance to the political situation, and while the total cost might be less than that of the new base at Singapore, the gain in security would be immeasurably greater. As it is, the new base seems calculated to intensify the very danger it was designed to avert.

CHAPTER VI

BRITAIN AND AMERICA: THE QUESTION OF SEA SUPREMACY

Only in recent years has the factor of naval power played any appreciable part in the political intercourse of Great Britain and the United States. The situation that developed soon after the war was such as to render its introduction inevitable. In December, 1918, Great Britain had practically given up the construction of heavy warships. With the exception of a solitary battle-cruiser, she was building only light cruisers and smaller craft, these being the residue of war-time programmes. No battleship had been laid down since 1914, and of the six battle-cruisers begun in 1915–16 three were ultimately cancelled. Concurrently with this suspension of heavy naval shipbuilding in Great Britain, the United States had embarked on a very formidable programme of capital tonnage. The Navy Act of August, 1916, had authorised the construction of ten battleships and six battle-cruisers, all of which were to be superior in dimensions and armament to the strongest warships then afloat.

The reasons which led the United States to adopt this great programme were examined by the author in a previous work.* Here it need only be said that the prospect of Germany emerging from the war with her fleet intact, and perhaps largely reinforced, furnished the principal motive. At that date the issue of the conflict was still in doubt. Germany,

* *Sea Power in the Pacific.*

moreover, made no secret of her animus against the United States, and if she succeeded in crushing her enemies in Europe, or even in securing a favourable peace by negotiation, it was more than possible that she would take the first opportunity of settling accounts with other nations which had incurred her displeasure. All parties in America were determined to forestall this danger by a timely expansion of the fleet. A further incentive to preparedness at sea was supplied by the growing strength of Japan. When the Navy Bill was introduced there was nothing to indicate that it was directed against British naval supremacy. Eight months afterwards the United States entered the war, and in consequence of the urgent demand that arose for anti-submarine craft the building of the capital ships had to be deferred. The first battleship, it is true, was laid down in April, 1917, but little work was done on the vessel till after the Armistice. When in due course the German Navy was swept from the board the original purpose of the great American programme disappeared.

But in the meantime a new motive had come into operation. The restraints placed upon American shipping and maritime trade during the period of that country's neutrality had caused much exasperation, and this feeling survived the war, notwithstanding that the United States itself, on becoming a belligerent, not only approved most of the existing British measures for controlling neutral sea trade but insisted that they be made even more rigorous. At the close of the war many influential Americans, including some who had all along championed the Allied cause, contended that the future welfare and security of the nation could not be secured without the maintenance of a navy second to none in strength. President Wilson and his immediate advisers went still further: they saw in a supreme American fleet the surest guarantee of world peace, believing as they honestly did that the United States alone could be trusted

never to abuse that instrument of sea power which had lately given such striking proofs of its potency.

This idea appears to have occurred to President Wilson during the peace negotiations at Versailles in 1919. It is, in any case, on record that he sought to strengthen his position at the Peace Conference by urging Congress to make larger appropriations for the navy. At a sitting of the House of Representatives on May 28, 1924, Representative Butler said: "It will be recalled that when President Wilson was at Versailles, Congress, in response to a cablegram from him, appropriated 400,000,000 dollars for ships which Mr. Wilson never intended to build. The fact of the appropriation was enough. It gave Mr. Wilson cards to play at Versailles." Although these additional vessels, having perhaps served their purpose as a form of moral suasion, were not proceeded with, the sixteen great capital ships of the original programme were all laid down between 1919 and 1921.

In his annual report for 1920 Mr. Josephus Daniels, the Secretary of the Navy, spoke of "the enlargements and additions needed for rounding out our great fleet, which, when the ships now under construction and recommended by the General Board are completed, will make the Navy of the United States the strongest in the world." That this was no idle claim can be seen by comparing the British and American battle fleets in 1921. In that year the tonnage of American capital ships built and building was almost exactly 50 per cent. greater than the corresponding British total. From the beginning of 1917 to the summer of 1921 not a single capital ship was laid down for the British Navy. Within the same period the United States began seventeen capital ships. But Mr. Daniels was not yet satisfied. At the instigation of the President—as we are bound to assume—he continued to press for more ships. The programme he advocated in 1920 would, if completed, have brought the United States Navy to a strength of

twenty post-Jutland capital ships, forty fast modern cruisers, and twice as many destroyers and submarines as the British Navy possessed.

To this day it is difficult to fathom the underlying motives of President Wilson's naval policy. Himself a man of peace, he nevertheless sponsored warlike preparations which, if allowed to mature, could scarcely have failed to prejudice the cause to which he was devoted. He may have thought that if his people were faced with the alternatives of joining the League of Nations or building the largest and most expensive navy in the world, they would choose the former. There is, indeed, strong evidence to support this hypothesis. Thus the Naval Secretary, in presenting his Estimates to Congress in 1920, was careful to observe that if the United States elected to join the League of Nations it would not be necessary for the people to be taxed for a larger Navy. In his annual report, published in December, 1920, Mr. Daniels stated the case in plainer terms: "If the United States takes its stand with other countries in an organisation to prevent war and promote peace, our present Navy . . . will be adequate for our defence and the prevention of aggression. But, if we are not to enter into a covenant with the other powers which are pledged to peace, if this country is to stand alone, outside any effective association of nations, we must be prepared to defend our interests against any possible opposition or combination. This will mean continuance of naval construction indefinitely, costly as this will be." The American people, however, decided against the League of Nations, so that in theory they stood committed to a policy of indefinite naval expansion; but the action of Congress in rejecting the supplementary building programme of 1920 cast doubt upon their willingness to translate this policy into practice.

One unfortunate result of the agitation for a supreme navy had apparently not been foreseen. To certain

other countries, where the domestic mainsprings of Mr. Wilson's policy were understood but dimly, if at all, it seemed as though the United States had become tainted with the militarism it had set out to destroy, and was now seeking to rule the world through the combined media of financial and naval supremacy. The fact that such an aim would have been diametrically opposed to American ideals and traditions did not prevent it from gaining widespread credence in Europe and Asia. In responsible British circles, however, a calm view was taken of America's naval aspirations, and there was a studied refusal to regard them as being in any way a challenge to this country. In spite of Mr. Winston Churchill's emphatic warning against the renunciation of our supremacy at sea, it was quite obvious that if the United States, with its superior wealth, chose to set the pace in naval construction, we should inevitably fall behind, for a time at all events.

But two civilised nations do not deliberately set out to compete in martial preparations unless there is some vital issue at stake between them. During the Great War Britain and America had fought side by side for a common purpose, and the end of the struggle found them in closer political accord than at any previous period of their relationship. There was, then, no imaginable reason why America should wish to institute a competition in naval armaments. That certain elements in America were hostile to this country, and missed no opportunity of making mischief, was well understood. Ample proof of their existence had been furnished before the war, and it was only to be expected that they would seize with avidity on the notion that America and Britain were henceforth to be rivals for the trident. That the remarkable evidence tendered to the Senate Naval Commission during its enquiry into the conduct of the war at sea left an unpleasant impression on the British mind, it would be futile to deny. There in black and

white was the admission that one of the highest members of the United States Navy, and the officer upon whom, more than any other, the control of the Navy in time of war devolved, had shown a singular lack of enthusiasm for the Allied cause when his country entered the war, and had even expressed indifference as to whether Britain or Germany were the enemy.

It would, however, be all too easy to exaggerate the importance of this and other verbal indiscretions which the Senate enquiry made public. A far weightier fact established by those proceedings was that the delay in sending destroyers and other anti-submarine craft to co-operate with the Allied forces in the immediate war zone was due, not to any want of enthusiasm for the common cause, but to a misconception of strategic requirements. As soon as the true position was understood the American Navy threw its whole weight into the contest, responding nobly to every demand made upon it, and earning the encomiums of all the British sea officers, from Admirals Jellicoe and Beatty downwards, who were brought personally into contact with it. The sentiments of the British Navy towards the American Navy were faithfully expressed in the farewell speech of Admiral Beatty to Admiral Rodman, the officers, and men of the U.S. battleships which had formed the Sixth Battle Squadron of the Grand Fleet.

Nevertheless, to say that the American Navy is entirely free from anti-British bias would be to misstate a notorious fact. The American Navy, as a microcosm of the American nation, inevitably reflects certain national prejudices the origin of which will be familiar to all who have read Mr. Owen Wister's courageous book, *The Ancient Grudge*. The "tail-twisting" proclivities manifested at times by some Americans of unquestioned Anglo-Saxon lineage are a continual source of surprise to English people who have neither visited America nor studied her history.

The writer has conversed with an American Senator who could trace his descent in an unbroken line from one of the great families of Elizabethan England, and who yet was convinced that England was and is the cradle of that brand of diplomacy which we are wont to associate with the name of Machiavelli. The following extracts from post-war speeches by Admirals of the United States Navy, three of whom are still on the active list, reveal the existence of a cult whose influence it would be as unwise to ignore as to exaggerate :

(1) " ' I know it will make some of you catch your breath if I say we must have a navy large enough to fight England.' The Admiral, observing that he had just returned from Europe, affirmed that England to-day was openly discussing just what would be needed in the way of a navy in case of trouble with the United States. He asked his audience why there should not be an equally open discussion in this country. He argued that it was necessary for this country to construct a navy to meet the Anglo-Japanese alliance. Congress should know, he added, against whom the navy was being built. Ships for war against Japan must be different from those for war against Britain."

(2) " Senator Lodge had called the Treaty for the limitation of naval armaments an experiment. It was an experiment, a dangerous one. They say that a great navy means war : why, the reverse is the fact. A great navy means peace. The United States is the only nation fitted to have a large navy. It is a high-minded nation. The other countries do not speak the same language. We ought to have the biggest navy and the biggest army in the world, so that we shall be able to enforce our influence."

(3) Testifying before the House of Representatives' Naval Committee which was enquiring into the naval oil leases, an Admiral stated that :

" It was the possibility of Japan, perhaps in

conjunction with Great Britain, invading the Pacific coast of the United States that prompted the Navy Department to arrange with the Doheny interests for the construction of fuel tanks at Pearl Harbour, Hawaii."

(4) Admiral ——: "In this policy upon which England seems to be fairly entered the United States is the power which could cause her the most serious rivalry. She does not wish us to interfere with her, as our national growth might permit us to do. Our limitation of armaments treaty played into England's hands, and, indeed, she originated it. It is England who, by her great merchant fleet, supported by an adequate navy, has it in her power to carry out or defeat the mandate of the League of Nations as she pleases. Among the great Powers of the League it is England which dominates the League and the world. England is the spokesman of the League as to economic war or peace. If the United States now joins the League, it will serve to increase the economic power of Great Britain, exerted through the League, and hence England's tears at our refusal to join."

In these quotations Britain is pictured as a potential enemy to the United States and her maritime power as a menace to American interests. There was, however, one great American whose views on questions of international policy commanded as much respect abroad as in his own country. This is what the late Theodore Roosevelt had to say of Anglo-American naval rivalry a month after the Armistice:

"Over here, representatives of the Administration are demanding a navy bigger than that of Great Britain. The only possible interpretation of these facts is that the Administration proposes to threaten Great Britain with having to get in a neck-to-neck competition with America to build the greatest navy in the world. Under these conditions the American people should with common sense look at what their own needs are, and at what the needs of their Allies

are. Sooner or later any programme will have to be tested by its results, and even if the United States started to emulate Great Britain's navy the enthusiasm to do so would vanish when it appeared that there was no earthly interest of ours to be served by the action . . . Great Britain is an island separated from the huge military commonwealths of Europe by very narrow seas, and separated from her own greatest colonies by all the greatest oceans. To her, supremacy in the navy is a matter of life and death. America ought to have a first-class navy, but if she did not have a ship she might yet secure herself from any invasion. But Great Britain's empire would not last one week, and she could not make herself safe at home one week, if her navy lost its supremacy. Incidentally to saving herself, the British Navy rendered incalculable service to us during the last four and a half years, and for the last thirty years has been a shield to the United States. Great Britain is not a military power in the sense that any of the nations of Continental Europe, or, indeed, Asia, are military powers. She had almost as much difficulty in developing her army in this war as we had in developing our army. Her army is no more of a threat to other peoples than ours is. Therefore, we Americans find ourselves, as regards the British navy, in this position: that it is of vital consequence to Great Britain to have the greatest navy in the world; it is emphatically not of any consequence to us to have as big a navy as Great Britain, for we are not in the slightest danger from Great Britain, and in all ordinary circumstances the British navy can be counted upon as a help to the United States, and never as a menace. In such circumstances, to set ourselves to work to build a navy in rivalry with Great Britain's, and above all to do this as political bluff, is worse than silly. Our own navy should be ample to protect our own coasts, and to maintain the Monroe Doctrine." *

* *Kansas City Star*, Dec. 17, 1918.

Notwithstanding the refusal of British statesmen to contemplate America as a definite rival at sea, they were in duty bound to maintain the naval equilibrium which was threatened by the huge American post-war building programme. The files of *The Times* and other representative British newspapers in 1919 and later years testify both to the anxiety that was felt with regard to the future naval situation and the reluctance to acknowledge America as a competitor in this particular field. It was by no means only a question of money. Had the United States been recognised as an avowed or even as a covert enemy, such as Germany had been, no financial effort would have been spared to meet the implied menace. But since the United States was not, and never had been, regarded in that light, the prospect of a naval shipbuilding competition with that country was viewed with extreme repugnance.

Lord Lee, as First Lord of the Admiralty, voiced British sentiment when he declared in March, 1921, that it was hard to believe in the development of Anglo-American naval rivalry, " because it would be so ridiculous and so silly." On the same occasion he reminded the United States that the British Government had twice affirmed in the most formal way possible its acceptance for the future of a one-Power standard. As the United States Senate had previously laid down the principle that America should maintain a navy at least equal to that of any other Power, it was obvious that the difference between the British and the American formulæ was very slight, and by no means sufficient to justify hostility or even controversy. Had the United States held to its original aim of gaining absolute supremacy afloat, a new era of competitive shipbuilding must have set in, since there are vital reasons why Great Britain can never accept a permanently subordinate rank at sea. But as soon as the United States modified its standard of naval power from supremacy to equality, the way

stood open for an agreement to avert competition between the two countries.

Towards the end of 1920 the trend of events was causing thoughtful Americans to reconsider the soundness of their naval policy. Public opinion was growing restive under the financial burdens imposed by the great battleship programme. Congress showed a tendency to cut down appropriations for shipbuilding, with the result that the new ships were making very slow progress. In fact, a year later (*i.e.* August 31, 1921) three of these vessels were only 10 per cent. complete, one only 2·5 per cent., and the rest from 13 to 34 per cent. complete. An influential group of politicians, headed by Senator Borah, was urging the Administration to secure a "naval holiday" by negotiation with the leading Sea Powers, and its efforts were so far crowned with success that in March, 1921, the Senate incorporated into the Naval Appropriation Bill a proposal that the President, "if compatible with the public interest," should invite the Governments of Great Britain and Japan to consider a reduction in naval construction programmes for a term of five years.

Japan by that time had become the predominating factor in American calculations. For a year or more she had observed with growing uneasiness the magnitude of American naval preparations, coupled as they were with an avowed intention of obtaining the supremacy of the seas. Her own interests were confined to the Pacific, and it was in that ocean that the United States was massing its forces. In August, 1919, the strongest squadrons of the U.S. Navy had passed through the Panama Canal to form the newly-organised Pacific Fleet. These movements coincided with the publication of plans for developing Pacific fleet bases on a large scale. Extensive naval works were projected in the Philippines, Guam, and Samoa; Pearl Harbour, Hawaii, was to be converted into a "Gibraltar of the Pacific."

Japan could not but feel herself to be the objective of these naval activities. She retorted by adopting, in 1920, the famous "eight-eight" programme, designed eventually to give her a fleet at least equal, and probably superior, to that of the United States. As it was to consist of sixteen capital ships, none more than eight years old, two ships were to be laid down each year. Upon the completion of the first Japanese group of sixteen ships, American primacy in Dreadnought tonnage would have disappeared unless further new construction had been undertaken in the interim period. To maintain its lead the United States would therefore have had to make a continuous effort, keeping ahead of Japan not merely in the number but in the individual power of its ships, extending its dockyard and base resources to keep pace with the ever-growing requirements of the fleet, increasing the *personnel* establishment year by year, and, of course, making larger and still larger financial provision for construction and maintenance. In these circumstances the cost of a supreme navy might well have become prohibitive, even to the richest country in the world.

It was already clear in 1921 that the sixteen capital ships then being built were not in themselves sufficient to make the American Navy predominant, even if naval strength were reckoned solely on the basis of Dreadnought tonnage. The first four ships were outclassed in size and speed by contemporary Japanese units, and as full particulars of the other twelve American vessels were known, it seemed probable that Japan, who had hitherto laid down only six ships, would substantially increase the fighting power of her later designs, in order to maintain a ship for ship superiority over the American fleet. She had, indeed, taken steps to that end. The battleships Owari and Kii, which were to be laid down in the financial year 1921–22, were designed on a basis of 45,000 tons and an armament of twelve 16-in. or eight 18-in. guns.

They would thus have been nearly 2000 tons heavier than the largest battleships of the American programme.

But capital ships are not the only essential components of a well-balanced fleet. Cruisers are just as indispensable, and of these important vessels Japan was providing twenty-six, against an American total of ten. The Japanese programme was timed to mature in 1927, by which date, therefore, the temporary lead which the United States might have gained by the completion of its sixteen post-Jutland capital ships would have passed away, unless additional vessels had been laid down. To maintain supremacy over Japan alone it would have been necessary to build three new ships a year from 1924–25. In view of the steady increase in dimensions the average cost per ship could not have been less than £9,000,000, so that the annual charge for new battleships would have amounted to £27,000,000 at a narrow estimate. It would further have become necessary to provide a proportionate number of non-capital units, such as cruisers, destroyer leaders, and ocean-going submarines, the collective cost of which could hardly have been less than £10,000,000 a year. If, therefore, the United States desired to retain its primacy among the Naval Powers, it would probably have had to spend £37,000,000 yearly on new ships alone, and its total budget for naval defence must have reached a staggering figure.

That the American public would long have tolerated such an orgy of expenditure on naval armament is more than doubtful. In 1921 the demand for economy had already become insistent throughout the country. When in June of that year the Republican National Committee met at Washington for the election of new officers, the leaders were warned that the party would fare badly at the next election unless definite action were taken to reduce national expenditures, and the Army and Navy were recommended

as the most suitable objectives for retrenchment. Another significant fact is that the pressure of public opinion compelled President Harding to accelerate his plans for international disarmament.* Popular enthusiasm for naval supremacy—if it ever existed—had given place to a fervent desire for economy and lower taxation. It is necessary to recall these antecedent conditions in view of statements since made by American critics of naval limitation that Great Britain was the real instigator of the Washington Conference, and incidentally the chief beneficiary thereunder.

That the idea of such a conference was welcomed in this country goes without saying. For reasons both of a financial and a political nature Great Britain was anxious to avert a new competition in naval armaments. Japan, too, was in the mood to accept any reasonable proposals for limitation, for the burden of defence was imposing a prodigious strain on her resources. For 1921–22 she was preparing Navy Estimates amounting to no less than £74,700,000, and the combined cost of her naval and military establishments was already absorbing one-half of her total revenue. In all three countries, therefore, and not least in the United States, public opinion was ripe for the limitation of armaments. Hence, suggestions that the Washington Conference was the result of political manœuvring on the part of one country or another are clearly devoid of foundation.

Before proceeding to deal with the Conference and its results, a final survey of naval developments in the three preceding years may usefully be made. At the end of the war the only Powers on the Allied side which had large naval programmes in hand were Great Britain, the United States, and Japan. Great Britain forthwith cancelled many of her unfinished ships, an example not followed by the other two Powers. The subjoined table shows the programmes

* *The Times* (London), June 11, 1921.

in train at the date of the Armistice and afterwards completed :

	Dread-noughts.	Aircraft-carriers.	Cruis-ers.	De-stroyers.	Sub-marines.
British Empire	1	2	17	64	40
United States .	4	—	—	141	53
Japan . .	2	—	4	10	9

The marked preponderance of tonnage completed by the United States has since been explained on the grounds that it was impossible wholly to stem the tide of war-time contracts without disorganising industry and wasting vast sums of money. Yet Britain, faced with the same problem, preferred to cancel ships wholesale. It is therefore a reasonable assumption that in deciding to complete the bulk of its war programme the American Government of the day was not uninfluenced by political motives, the character of which has already been explained. After the war Great Britain entered upon a " naval holiday," which lasted nearly three years, contenting herself with the leisurely completion of ships left over from the war. The progress of construction by the three leading Powers in this period is tabulated below :

	Dread-noughts.	Aircraft-carriers.	Cruis-ers.	De-stroyers.	Sub-marines.
British Empire	4	—	—	—	1
United States .	16	—	10	77	30
Japan . .	6	1	9	30	27

The four British capital ships shown in this table were the " super-Hood " battle-cruisers authorised in March, 1921, but not laid down till the eve of the Washington Conference. Actually, therefore, British construction in the three years ending in November, 1921, was limited to a single submarine. On the other hand, all the American and Japanese vessels enumerated were either on the stocks or completed. The inference suggested by these facts is that the United States began almost immediately after the war to set

the pace in naval construction, and was soon followed by Japan, while Great Britain and the other Powers held aloof from the race until the threat of being reduced to impotence at sea compelled them also to resume building operations; in other words, but for the competitive shipbuilding of the United States and Japan in the early post-war period, the "naval holiday" which set in after the Armistice might have continued indefinitely.

This inference, however, would not be entirely fair to the two Powers in question. Had all naval construction ceased at the Armistice the position would, no doubt, have been very satisfactory from the British point of view. It would have meant not only that Great Britain preserved her traditional supremacy, but that her navy was more powerful than all other navies combined. Her control of the seas would have been absolute. That other great and powerful nations which had done their part in winning the war and upholding the freedom of the seas would cheerfully acquiesce in this state of affairs was not to be expected. They felt themselves justly entitled to a proportionate share of naval power for the defence of their coasts and the protection of their maritime trade. It was therefore certain that the "naval holiday" instituted by Great Britain would be of very brief duration.

It might have been prolonged, however, had we announced our intention of at once reducing the fleet to the pre-war standard of strength. We did, in fact, make large reductions in *personnel* and material (in 1920, for example, the *personnel* of the Navy was reduced by one-half), but the majority of the best ships were retained in service, and very powerful fleets were commissioned for service in home and foreign waters. As late as July, 1920, the naval establishment still included thirty-two Dreadnought battleships and thirteen battle-cruisers, a total of forty-five modern capital ships, according to the official Navy list for that month. On the same date

there were, at most, forty ships of equivalent power serving under other flags, so that we had a clear margin over the combined Dreadnought fleets of the world. These figures, it is true, relate only to completed ships, but it is still a moot point whether the great programmes upon which America and Japan were then at work would ever have been launched if Great Britain had taken the initiative in disarmament at sea in the first months after the war. Had that been done it might never have occurred to President Wilson to fortify his policy of world-wide peace by creating an American navy of unprecedented magnitude.

We should, no doubt, have had to accept a status of equality with the United States; but since we intimated our agreement with that principle in 1920, there was no apparent reason why we should not have done so two years earlier, thereby cancelling the chief motive which America had for expanding her fleet. Against this thesis may be urged the fact that the continuance of naval rivalry for several years after the war had one good result, in that it led to the first international covenant for the restriction of armaments. That is true. Nevertheless, as we shall see, the short period of intensive competition for naval pre-eminence produced other and less beneficial effects which still make themselves felt, particularly in the sphere of Anglo-American relations.

CHAPTER VII

THE NAVAL CONFERENCE: BEHIND THE SCENES AT WASHINGTON

THE Washington Conference was heralded by an official announcement from the White House on July 10, 1921, couched in the following terms:

"The President, in view of the far-reaching importance of the question of limitation of armaments, has approached with informal but definite enquiries the group of Powers heretofore known as the Principal Allied and Associated Powers—that is: Great Britain, France, Italy, and Japan—to ascertain whether it would be agreeable to them to take part in a conference on this subject to be held in Washington at a time to be mutually agreed upon. If the proposal is found to be acceptable, formal invitations for such a conference will be issued. It is manifest that the question of limitation of armaments has a close relation to Pacific and Far Eastern problems, and the President has suggested that the Powers especially interested in these problems should undertake in connection with this conference the consideration of all matters bearing upon their solution, with a view to reaching a common understanding with respect to principles and policies in the Far East. This has been communicated to the Powers concerned, and China has also been invited to take part in the discussion relating to Far Eastern problems."

The response to this gesture was sufficiently encouraging to justify President Harding in issuing formal invitations to the proposed conference. While the official replies of the various Governments were not

published, their general tenor is known. Great Britain forwarded a cordial and unqualified acceptance. Japan sent a courteous note, expressing pleasure at the opportunity to make her naval policy clear to a Power towards whom she had always cherished sentiments of friendship and esteem. At the same time she desired to ascertain in advance the scope and nature of the Far Eastern problems that were to be discussed. This information was at once placed at her disposal by the American State Department, whereupon she signified her acceptance of the invitation, but with the proviso that the introduction into the agenda " of problems such as are of sole concern to certain particular Powers, or such matters that may be regarded as accomplished facts, should be scrupulously avoided."

France and Italy both accepted the invitation, though there is an uncontradicted report that the former took occasion to explain that naval limitation was for her already a fact, seeing that her fleet, depleted by heavy war casualties, was far below the minimum standard of strength enjoined by her extensive maritime responsibilities.

During the months that intervened between the first announcement and the assembly of the Conference, a good deal of unofficial propaganda was conducted by naval interests in the countries concerned. No hint had been dropped by the United States regarding the nature of the proposals it had in mind, but there was a general impression that existing programmes would not be interfered with and that such restrictions as might be suggested would refer only to future construction. For example, Mr. Lloyd George said in the House of Commons on July 21, 1921, that the Government had found it necessary to proceed with the building of four battle-cruisers, and " this necessity is not affected by the possible success or failure of the forthcoming Conference. I am assuming," he added, " that the Conference will be a com-

plete success; but I do not see how it will affect expenditure on these particular ships." A few weeks later the Prime Minister of Australia expressed doubts as to the success of the Conference, because it was "hardly believable that any of the Powers would consent to discard the great battleships they were already building, and upon which vast sums of money had been spent."

British writers warned their compatriots that as naval strength meant more to Great Britain than any other country, extreme caution would have to be shown by our delegates lest we found ourselves committed to some inadequate standard of power. American naval publicists were no less emphatic from their point of view. Interested parties, they predicted, would seek to undermine the commanding position which the American Navy was about to attain, and the United States must therefore not allow her idealism to blind her to vital national interests.

The Japanese Press was almost unanimous in regarding the approaching Conference with suspicion. It was held to have been jointly convened by America and Great Britain with a view to coercing Japan and estranging her from China. The veteran statesman, Marquis Okuma, wrote to the Tokyo *Asahi* in this sense, and a similar opinion was voiced, among others, by Viscount Kato, who afterwards became Prime Minister. With regard to the Pacific naval problem, Japan's attitude was made clear several months before the Conference. A news despatch from Tokyo on July 26 stated that "the Foreign Office and the War and Navy Departments are understood to be considering a proposal which originated with the naval authorities, having in view the non-fortification of island zones and a declaration of the freedom of the Pacific. This proposal will, it is reported, be forwarded to Washington with a view to its being placed on the agenda for the coming Conference." *

* *The Times* (London), July 27, 1921.

Japan attached far more importance to the limitation of bases than of warships, and, as we shall see, she contrived to carry her point.

Although the contents of the agenda, in so far as they related to Eastern political problems, may have been communicated to the various Governments beforehand, there is not the least doubt that they remained completely in the dark as to America's plans for naval restriction. Mr. Hughes, at that time Secretary of State, has since stated more than once that no previous consultation took place with the other Powers on this subject. The proceedings opened on Nov. 12, 1921. After a short inaugural speech from President Harding, the Secretary of State rose to submit the American proposals. "The world," he declared, "looks to this Conference to relieve humanity of the crushing burden created by competition in armaments, and it is the view of the American Government that we should meet that expectation without unnecessary delay. To put an end to these incessant armaments and to seek a means of warding off the calamities which are threatening the whole world,—such is the supreme duty which is to-day imposed on all States."

He went on to explain that the core of the problem was to be found in competitive programmes, and that before naval armaments could be effectually controlled it was essential to get rid of the spirit of rivalry. This involved the renunciation of programmes already in hand, and, in consequence, serious financial sacrifices. Yet if the construction of battleships were to proceed unchecked, others would inevitably be built to rival them. To put an end to this futile and wasteful competition the United States proposed, not only that all further capital construction be suspended for a period of not less than ten years, but that all the great warships then being built should be forthwith discarded and broken up.

The United States itself was ready to cancel all its

unfinished ships, fifteen in number, of which six battle-cruisers and seven battleships were on the stocks, and two battleships launched. Some of these ships were from 60 to 80 per cent. complete, and upon them a total sum of £66,000,000 had been spent. The United States was further prepared to scrap a number of older battleships, and, in fact, to reduce its total tonnage of capital ships, completed and building, by 845,740 tons. In return, it invited Great Britain to sacrifice the four new "Hoods" and fifteen older vessels, amounting in all to 583,375 tons. Japan was asked to cancel all save one of the capital ships completed, building, or projected under her "eight-eight" programme, together with all her pre-Dreadnoughts, representing an aggregate of 448,928 tons.

The plan therefore contemplated the immediate destruction by the three Powers of sixty-six capital ships built, building, and projected, with a total displacement of 1,878,043 tons. When these vessels had been removed the respective battle fleets would be composed as follows: United States, eighteen ships of 500,650 tons; Great Britain, twenty-two ships of 604,450 tons; Japan, ten ships of 299,700 tons. No new capital ships were to be laid down for a period of ten years from the date of the agreement, and replacements thereafter should be limited to an agreed maximum of tonnage—namely, for the United States, 500,000 tons; for the British Empire, 500,000 tons; for Japan, 300,000 tons. Finally, no future capital ship should have a displacement exceeding 35,000 tons or guns of more than 16-in. calibre. Non-capital units, designated "auxiliary craft," were also to be brought within the scope of limitation, the following tonnage allotments being specified:

	Aircraft-carriers.	Cruisers and Destroyers.	Submarines.
United States .	80,000	450,000	90,000
British Empire .	80,000	450,000	90,000
Japan . .	48,000	270,000	54,000

For the purposes of the agreement a capital ship was assumed to be any vessel of war, other than an aircraft-carrier, whose displacement exceeds 10,000 tons and which carries a gun of more than 8-in. calibre. All vessels below these standards were classed as "auxiliaries."

Such, in essence, was the plan that Mr. Hughes laid before the assembled delegates. They were amazed at the drastic and sweeping nature of his proposals, which went far beyond their wildest anticipation. Yet on the whole there was a marked tendency to view them favourably, in principle at least. "The first impression of the British and Japanese is that the plan seems fair to all, and was not designed in any huckstering spirit," wrote the late Colonel Repington. "It is a deal, and apparently a fair deal. There may be amendments proposed in details, especially regarding auxiliary craft; but the general impression is that the scheme will go through." The cardinal American objects were, first, to put an end to competition in naval armaments, and, secondly, to stabilise the relative power of the world's leading navies by a system of ratios. Between the American and British navies there was to be absolute equality of power; Japan was to be restricted to three-fifths of the common American and British ratio, and France and Italy, respectively, to a ratio rather more than half as large as the Japanese. Expressed in numerals the proposed ratios in the above order of precedence were: 5, 5, 3, 1·67, 1·67.

There could be no surer evidence of the goodwill and sincerity with which the various Powers had approached the Conference than the fact that this very drastic plan was accepted in principle by all. It is true that prolonged and sometimes heated debates subsequently took place on points of detail, but the plan of battleship limitation met with no serious opposition in any quarter. Discussion first centred on the proposed ratios of strength. Japan,

while agreeing to accept a heavy reduction of her fleet as compared with those of Britain and America, held that her insular position and vital dependence on sea defence entitled her to a larger share of tonnage than the plan contemplated. Further, she strongly demurred to the inclusion of the battleship Mutsu among the ships to be scrapped. This vessel, a post-Jutland unit of the most powerful type, was actually running her trials when the Conference met, and was therefore to all intents in a state of completion. In spite of considerable pressure from the American side, Japan insisted on retaining this ship.

Her action, though by no means unreasonable, had important consequences. Since the whole system of capital ship ratios depended mainly on the allocation of post-Jutland tonnage, the retention of two such vessels in the Japanese navy instead of one necessitated a revision of the establishments proposed for Britain and America. The difficulty was eventually surmounted by authorising America to complete two more of her unfinished battleships, thus increasing the number of her post-Jutland units to three, and empowering Britain to lay down two new ships, which, added to the Hood (which partly embodied Jutland experience), would give her also three units of modern design. To compensate for these additions, older ships had to be deducted, one from the Japanese, two from the American, and four from the British fleet.

It was thought that Japan, having gained her point with regard to the Mutsu, would raise no further objection to the proposed battleship ratio. But she now came forward with an important amendment. The American plan dealt entirely with ships, and took no cognisance of other elements of naval power. Yet, as the Japanese delegates argued, bases were as necessary as ships, and if the interests of peace demanded a drastic reduction in ship tonnage, it followed logically that naval bases should also be restricted. Admiral Baron Kato, the principal delegate, said

quite frankly that if Pacific fleet bases were to be excluded from the agreement, his Government would be unable to accept the proposed reduction of its naval forces. While there is reason to believe that this development did not take the American representatives by surprise, the fact that no mention of bases occurred in the original plan was significant. American naval opinion was known to attach great importance to the provision of well-equipped fleet stations in the Western Pacific, both as a defence to the Philippines and as a means of enabling the American fleet to operate in Far Eastern waters. It is therefore conceivable, and even probable, that the base factor was excluded from the Hughes plan at the express desire of the Washington naval authorities.

When Japan raised the question she had in mind the projected American bases at Guam and Manila, for the improvement of which Congress had already voted funds. According to unofficial versions of the Conference proceedings, the Japanese demand for the neutralisation of these and other Pacific fleet harbours met with such firm resistance from the American naval experts that a deadlock threatened to ensue. American critics have since complained that Japan would probably have modified her attitude but for the support she received from the British side. Of this there is no evidence. That our delegates may have acknowledged the reasonableness of Japan's case is possible. On the other hand, they opposed it to the extent of insisting that Singapore should remain outside the zone in which the development of naval bases was to be inhibited. The real issue lay between America and Japan.

American naval objections were finally overruled by Mr. Hughes, who was well aware that a Japanese refusal to accept the proposed limitation of tonnage would wreck the Conference, and Japan by now had made it perfectly clear that her acceptance was only

to be secured on the terms stated. After further debate it was agreed to maintain the *status quo* as to fortifications and naval stations in the Pacific, but with certain exceptions. America gave up her plan for building new bases at Manila and Guam, but retained complete freedom of action at Hawaii. Great Britain undertook to make no naval improvements at Hong-kong, while reserving the right to take such naval precautions as might be expedient at Singapore and at islands adjacent to the coasts of Canada, Australia, and New Zealand. Japan rather surprisingly agreed not to proceed with the fortification of the Bonin Islands, the Kurile Islands, Amami-Oshima, the Loochoo Islands, Formosa, and the Pescadores, all of which are points of considerable strategic importance. It is true, however, that several of these islands were already well defended, and that the agreement did not preclude "such repair and replacement of worn-out weapons and equipment as is customary in naval and military establishments in time of peace." If, for example, a coastal battery were armed with obsolete guns, it would, apparently, be permissible to replace them with new weapons of greatly superior range and power, so long as the original calibre was not exceeded. This agreement establishing the *status quo* as to Pacific bases was incorporated in the Treaty, of which it forms one of the weightiest clauses.

Barely had this critical question been adjusted when a new controversy arose. The proposed ratios of non-capital tonnage had been received less favourably than those relating to capital ships. Great Britain, with an eye to her vast floating trade, foresaw danger in the limitation of cruisers, which might leave her powerless to safeguard the sea routes in a future emergency. Recent war experience had demonstrated the necessity of having an ample margin of cruiser strength to cope with hostile commerce-destroyers, such as the Emden, Karlsruhe, Moewe, and Wolf. It was a dis-

turbing thought that had the proposed limitation been in force in 1914 these German corsairs might have roamed the sea at will, since there would not have been nearly enough British cruisers available to hunt them down. Then, again, the submarine menace to trade, which had assumed such terrifying proportions during the war, might well recur at some future date, in which case there would be an urgent call for destroyers, the natural enemies of the submarine raider. But under the proposed agreement the number of destroyers would be strictly limited, and at least twelve months must elapse before the deficiency could be remedied by new construction. What might happen during those twelve months could readily be conjectured. It was not too much to say that the fate of Britain and her Empire might depend on the number of destroyers available at a given period.

These considerations were already weighing heavily on the minds of our delegates when matters were brought to a head by the refusal of France to accept the quota of submarine tonnage (30,000) allotted to her under the Hughes scheme. At the date of the Conference France had between 30,000 and 40,000 tons of submarines built, building, and projected. She now demanded a minimum of 90,000 tons, on the plea that the weakness of her surface fleet and the vulnerability of her coastline and sea communications rendered it necessary for her to create a powerful fleet of submarines for self-defence. It was obvious that if this demand were persisted in, the proposed ratios of "auxiliary" tonnage—which for all practical purposes might just as well be designated "anti-submarine" tonnage—would be inadequate.

Great Britain had meanwhile introduced a resolution condemning submarines *in toto* and urging their abolition by international decree. It met with a chilly reception, the blame for which must be ascribed in part to the unfortunate arguments presented by our delegates. Briefly, they were that the

submarine was practically useless for any legitimate operation of war, and owed its reputation entirely to the havoc it had caused among defenceless merchantmen and hospital ships. Lord Lee went so far as to declare that the submarine, "whether considered as an offensive or a defensive weapon against any sort of organised naval force, had proved almost contemptible." These statements were so far contrary to recent war experience, as interpreted by informed naval opinion all over the world, that they failed to carry weight with the Conference.

Speaking on behalf of France, M. Sarraut expressed "profound disapproval of the barbarous use made of submarines in the late war," but contended that the submarine was pre-eminently a defensive weapon, especially for nations scantily supplied with capital ships. Submarines of large cruising radius were needed to protect remote colonies and lines of communication, he added, and he saw no reason why they should not be used as honourably and legitimately as any other type of warship. Signor Schanzer, the Italian spokesman, challenged Lord Lee's opinion that the submarine was not an efficient instrument of defence. He quoted the naval experts of his country as believing this vessel to be indispensable for coast defence. Mr. Hanihara said that Japan, while "unconditionally opposed to all abusive uses of submarines such as those recently committed by a certain nation," felt that their legitimate employment was justifiable and necessary for defence purposes.

American opinion was reflected in a report by a committee which had been appointed to advise the American delegates regarding public opinion in their own country, and which now reported to Mr. Hughes in the following terms: "The retention of a large submarine force may at some future time result in the United States holding its outlying possessions. If these colonies were once lost, the expenditure and men necessary to recapture them would be tremendous,

and it might result in a drawn war which would really be a defeat for the United States. The United States needs a large submarine force to protect its interests." This somewhat naïve admission that national interests should in the future, as in the past, be the sole guide to naval policy was qualified by a remark that " whatever is said about unlimited warfare by submarines is also true of unlimited warfare by surface craft, provided that a combatant wished to violate the rules of war."

It was painfully evident that Germany's U-boat misdeeds, while drawing upon her a chorus of moral censure, had nevertheless engendered an almost universal respect for the submarine as a weapon of destruction. By their attitude at the Washington Conference, the United States, Japan, France, and Italy made it clear that so far from feeling any special abhorrence of the submarine, they held it in high esteem, despite the fact that it owed its sinister reputation largely, though by no means entirely, to the illegal and often barbarous manner in which it had been employed. Hence the British proposal for the abolition of submarines failed to secure official support in any quarter, though it is worthy of note that public opinion in the United States, as reflected in the Press, strongly approved it.

Under these circumstances our delegates could hardly be expected to sympathise with the French claim to a quota of submarine tonnage thrice as large as that proposed, and considerably more than twice as great as the tonnage she then possessed. It was, indeed, a singular fact, as Lord Lee did not fail to point out, that the American plan of " limitation " actually provided for a substantial increase in existing submarine fleets. Under it, the United States could build 6500 tons, Great Britain 9500 tons, and Japan 21,800 tons, with France and Italy in proportion. " It seemed very strange to put before a conference on the restriction of naval armament proposals designed

to foster and increase a type of war vessel which, according to the British view, was open to more objection than capital ships."

A warm controversy soon developed between Lord Lee and Mr. A. J. (now Earl) Balfour on the one hand, and M. Sarraut and Admiral de Bon on the other. The French admiral, in defending the submarine, painted a glowing and, of course, strictly honourable future for this weapon. He was not, perhaps, altogether discreet in dwelling upon its unique powers as a destroyer of commerce. Submarines, he affirmed, had proved to be specially efficient against merchantmen. It had always been an effective means of crippling one's adversary to attack his merchant craft, and it would always seem to be legitimate to do so. Here was a plain declaration that France wished to have in her hands the means of waging submarine warfare against the merchant shipping of a future enemy, because this particular method of warfare had proved signally effective. Its "effectiveness" had, indeed, been fully demonstrated in the Great War, in the course of which German U-boats sank 12,000,000 tons of shipping and killed over 20,000 non-combatants. Needless to say, the delegates of France warmly repudiated the idea that their submarine commanders could ever be guilty of illicit or brutal practices; yet they failed to meet the argument that the submarine, by its very nature, cannot be used with effect against merchant shipping unless it ignores the laws of prize and other established rules of warfare.

The trend of French opinion was indicated when Lord Lee quoted to the Conference certain extracts from a study on submarine warfare by Captain Castex, a French naval savant whose views admittedly carry weight in his own country. The accuracy of this quotation was challenged at the time, but Lord Lee had no difficulty afterwards in vindicating the fidelity of his translation. Captain Castex not only

condoned the sinking of merchant vessels and liners with their crews, passengers, and cargo, but claimed with pride that these very methods had been advocated by French naval strategists many years before the war, as indeed they had.

By this time the atmosphere of the Conference had become charged with electricity. Mr. Balfour, in a most telling speech, was able to demonstrate the inconsistency of the French claim to such a huge proportion of submarine tonnage. Against whom could this tremendous armament be directed, he asked? Surely not against Germany, whom France professed to regard as her most probable future antagonist. All the submarines in the world would not preserve her frontiers from invasion by her great neighbour in the East. Anybody who studied prevailing conditions of strategy, tactics, and geography would certainly conclude that this mass of submarines was to be built against England. "When we try to combine the military policy announced by M. Briand with the naval policy announced by Admiral de Bon, we cannot fail to see that here is a naval and military scheme strangely incoherent and inconsistent. Men will inevitably ask themselves: 'What is the ultimate end underlying all that is being done? Against whom is this submarine fleet being built? What purpose is it to serve? What danger to France is it intended to guard against?'" To these trenchant queries the French delegates were unable to return a convincing answer. They could only repeat their demand for what seemed to all the other delegates an inordinate allowance of submarine tonnage.

In an endeavour to avoid the threatened *impasse* Mr. Hughes hastily introduced a fresh proposal, namely, that America and Great Britain should agree to reduce their respective submarine establishments to a common basis of 60,000 tons, while Japan, France, and Italy retained the tonnage they already

possessed. This arrangement would have left Japan with approximately 32,000, France with 40,000, and Italy with 22,000 tons of submarines. France at once notified her inability to accept the proposal. Her point was, that since the battleship restriction scheme would leave her with a puny surface fleet, as compared with the far stronger armadas to be maintained by Great Britain and the United States, it was essential that this serious loss of battleship power should be compensated by increased submarine strength. In short, she demanded parity in submarine tonnage with Great Britain and the United States, and would be content with nothing less.

For nearly a fortnight the Conference debated this question, for it was recognised that the proceedings had reached a crucial stage. Numerous alternative proposals were considered, but the cleavage between the British and French views was far too wide to admit of compromise. Britain received a certain amount of moral encouragement from America, but since the latter had formally endorsed the legitimacy of submarines, she was unable to take a definite stand against the French claim. Italy sided with France, making it clear, however, that she expected the same proportion of submarine tonnage as her neighbour. Japan held aloof from what had now become a serious dispute, the reverberations of which were already heard in the political corridors of Europe. In the end the Conference, wisely no doubt, elected to follow the line of least resistance.

The British Empire delegates had consistently upheld the view that "auxiliary surface craft" were potential antidotes to the submarine. Destroyers and patrol boats had clearly demonstrated their value in this field, but they could not pursue their operations with full effect unless they were themselves protected from interference by enemy surface vessels. Since the cruiser was their natural guardian, this type of vessel also came within the anti-submarine category.

It was accordingly intimated that Great Britain, in view of the large submarine forces that other Powers were obviously determined to maintain, did not feel justified in accepting the proposed restriction of "auxiliary surface craft." Efforts to establish new ratios of submarine to light surface tonnage that would satisfy all parties proved unavailing. The truth is that save in the United States no particular zeal was shown for the limitation of cruisers and other light vessels. Japan's delegates had all along maintained that cruisers and destroyers, unlike battleships, were built primarily for defensive functions, such as the protection of sea coasts and lines of communication. In view of this attitude it is very doubtful whether Japan would have been content with the quota of auxiliary tonnage allotted to her under the Hughes plan, even if the submarine controversy had not intervened.

It now became evident that the original scheme of limitation could not be carried out. Fresh obstacles were encountered at every turn, and much time was lost in attempting to reconcile utterly conflicting points of view. For a week or more it seemed as though the Conference, despite its auspicious opening and the striking results obtained in the initial phase, was about to end in failure. This calamity was averted by an eleventh-hour decision to exempt auxiliary craft from numerical restriction. It meant, of course, that the prime object of the Conference had been found unattainable. That object was to put an absolute stop to naval competition by establishing an immutable scale of strength for the principal war fleets. To achieve this it was essential that all species of combatant craft should be equally subject to control. Were any single type exempted a loophole would be left for the renewal of competitive building, if only because a State dissatisfied with its quota of controlled tonnage would be tempted to make up the difference by building more units of the

unrestricted type. Nevertheless, this risk had to be accepted as the only alternative to the complete breakdown of the Conference. It was therefore agreed to limit capital ships and aircraft-carriers alone. Auxiliary craft were not to be restricted in number, but it was enacted that no unit should exceed 10,000 tons or carry guns of greater calibre than 8-in.

This result fell far short of the hopes that had been entertained by the promoters of the Conference, but no greater measure of success was possible under the circumstances which had developed. Although the submarine had escaped both abolition and restriction, and had even received, as it were, a patent of respectability, an endeavour was made to circumscribe its future activities. For the conduct of warfare on merchant shipping a set of rules, "to be deemed an established part of international law," was drawn up and embodied in a separate Treaty. They include the following: (1) A merchant vessel must be ordered to submit to visit and search to determine its character before it can be seized; it must not be attacked unless it refuse to submit to visit and search after warning, or to proceed as directed after seizure; it must not be destroyed unless the crew and passengers have been first placed in safety. (2) Belligerent submarines are not under any circumstances exempt from the universal rules above stated; and if a submarine cannot capture a merchant vessel in conformity with these rules the existing law of nations requires it to desist from attack and from seizure, and to permit the merchant vessel to proceed unmolested. Recognising the practical impossibility of using submarines as commerce raiders without endangering the lives of neutrals and non-combatants, the signatory Powers bound themselves not to employ their submarines in this way, and invited all other nations to accept the like inhibition. A further clause in this separate Treaty forbids the use in war of poisonous gases.

As a safeguard against the abuse of submarines and

chemical science in future warfare the value of this interdict is problematical. Although more than five years have passed since it was signed, it has not yet been ratified and is therefore inoperative.

As finally drafted, the limitation agreement regarding capital ships and aircraft-carriers differed somewhat from the original plan submitted by Mr. Hughes. The main differences are tabulated below:

	United States.	British Empire.	Japan.
Number of capital ships retained.	18	20	10
Number originally proposed .	18	22	10
Tonnage to be retained . .	525,850	558,950	301,320
Tonnage originally proposed .	500,650	604,450	299,700
Tonnage of aircraft-carriers retained	135,000	135,000	81,000
Tonnage originally proposed .	80,000	80,000	48,000

The British Empire, it will be observed, retains a larger quota of capital ships than the United States. This is because the new American vessels are individually larger, more powerful, and of later design than the British. Of ships above 30,000 tons there are no less than ten in the United States Navy, and only three in the British Navy. These ten American ships carry 108 guns of 14-in. calibre and over, while the ten most powerful British vessels carry only eighty-two guns. On the other hand, the average of calibre is higher in the British Navy.

A number of technical points in the agreement were the subject of adverse comment. It was argued, for example, that the limits imposed on future capital ships were needlessly liberal and would tend to increase both the cost and destructive power of these vessels. It was true that one such vessel had been built with a displacement of 41,200 tons, but with this exception the largest battleships then in existence were of 33,800 tons and the majority were under 30,000 tons. Moreover, the 35,000 tons "standard" displacement laid down as the future maximum was

deceptive, in that it excluded fuel and feed-water for the boilers—two items which might represent a total weight of 4000 tons or more. Thus a battleship built under Treaty rules would be larger by 5000 to 6000 tons than any previous ship save H.M.S. Hood. Objection was further taken to the limits prescribed for future cruisers, viz. 10,000 tons displacement and 8-in. guns, on the ground that they were considerably above the prevailing standard for these ships. The effect of the Treaty, it was contended—and, as experience has proved, with justice—would be to encourage the building of ships greatly superior in fighting power to those already afloat, and of proportionately higher cost. Still more remarkable were the rules with regard to future aircraft-carriers. At the date of the Conference the largest existing vessel of this type was of 22,600 tons; yet the Treaty not only established a general maximum of 27,000 tons, but authorised any Power to build two carriers of 33,000 tons each. The heaviest guns mounted in an aircraft-carrier previous to the Conference were 6-in., yet the Treaty permits the mounting of 8-in. guns in future ships, which may carry up to ten of these powerful weapons.

This careful provision for naval interests in a compact designed to promote disarmament is rather suggestive. It indicates that the naval experts of the United States were allowed a pretty free hand in the drafting of the Treaty, and made the most of their opportunities. The generous limits of displacement and gun-power for cruisers are said in America to have been inspired by Great Britain, who was anxious that her five ships of the "Raleigh" class (9750 tons) should not be condemned, as they might have been had the maximum displacement been fixed, say, at 6000 tons. But the evidence is against this supposition. In the original Hughes plan—drafted entirely by Americans—the maximum armament of vessels other than capital ships was fixed at 8-in., a calibre

necessarily associated with heavy displacement. Evidently, therefore, big cruisers were regarded as desirable by American experts, and the way was accordingly left open for their construction. But the delegates of other countries showed an equal solicitude for the interests of their respective navies.

Had there been a genuine and universal will to disarmament at sea, a much more effective and a perfectly feasible method might have been devised. This was simply to extend to other navies the restrictions imposed on the German fleet by the Treaty of Versailles. Under that covenant Germany may not construct armoured ships exceeding 10,000 tons, cruisers of more than 6000 tons, and destroyers of more than 800 tons, and she is forbidden to possess submarine craft of any description. Drastic as they may seem, there was no apparent reason why these rules should not have been adopted by the Powers assembled at Washington. It is true that some independent State might have secured a temporary advantage by building ships of superior tonnage and fighting value, but this contingency would have been covered by a clause in the present Treaty (Art. XXI.), which provides that if " any change of circumstances " should occur to affect the naval defence of a signatory Power, a fresh conference may be called with a view to amending the provisions of the Treaty by mutual agreement.

But if the Washington Naval Treaty was much less drastic than it might have been made without prejudice to the security of any Power concerned therein, it nevertheless represents a diplomatic achievement unparalleled in history. For the first time it had been found possible to limit armaments by an international pact. The principle thus established was infinitely more important than the immediate result. All previous attempts in this direction had ended in complete and ignominious failure. The Hague Conference summoned by the late Emperor

of Russia not only failed to arrest the growth of armament, but gave it a fresh impulse by accentuating mutual jealousies and suspicions. Twenty-two years ago a tentative suggestion by the United States Government that the Powers should meet to discuss a reduction of their war resources met with the coldest response. Great Britain's repeated but utterly fruitless attempts to reach an understanding with Germany on the question of relative naval strength in the pre-war period are a matter of common knowledge.

Measured by the dismal records of the past, the Washington Conference was a stupendous success. It nipped in the bud a new and most ominous development of rivalry at sea which, if allowed to proceed unchecked, must sooner or later have led to a fresh conflagration. At a period when the continuance of harmonious relations between the two great English-speaking commonwealths was of supreme importance, it mitigated the one and only cause of dissension that might have sundered them. For these reasons, if for no other, the Washington Conference will always stand out as a landmark in modern history. It created a precedent of which posterity, if not our own generation, will assuredly avail itself if ever the peace of the world is again menaced by competitive preparation for war.

CHAPTER VIII

THE NAVAL TREATY: GAINS AND LOSSES

The Washington Naval Treaty had a mixed reception from the nations immediately concerned. In this country it was warmly welcomed, though there was a natural tendency to dwell upon the surrender we had made of our historic supremacy afloat. For well over a century it had been a cardinal aim of national policy to maintain under all circumstances a predominant fleet. This we had always contrived to do, even though at times we were hard pressed by rivals ambitious to wrest the trident from our grip. While it is probable that our naval power in the post-war era would have suffered eclipse but for the Washington agreement, nobody familiar with the temper and traditions of the British nation will fall into the error of supposing that we should long have remained content with a definitely subordinate position at sea. Less than three years after the war we had taken the first steps towards the rehabilitation of the Navy by preparing to lay down new capital ships of matchless power.

Unwilling as we might have been to enter into competition with the United States, it is morally certain that if the latter had persevered in her intention to achieve battleship primacy we should have done our utmost to meet the challenge. Nor would it have been a contest in which money alone counted. In this country there was and is a definite national resolve to maintain the strength of the Navy at all costs. A similar resolve may have animated the American people for a brief period after the war, but

there were signs that it was weakening. Happily the matter was not put to the test.

The Treaty might have been less favourably received by British opinion had it been framed on the lines originally contemplated. Objection had been taken from the first to the proposed restriction of "auxiliary" craft, on the ground that the strategic requirements of the Empire are such as to demand an exceptionally large fleet of cruising ships. In British naval circles few tears can have been shed over the failure of the Conference to reach an agreement on the limitation of these ships. But so far as capital ships were concerned, the forfeiture of supremacy was accepted in a philosophic spirit. While the Treaty placed us on an equal footing with America in this class of tonnage, it left us with a considerable margin of strength over every other Power. Since the United States had never been viewed as a potential enemy, the loss of battleship supremacy over that country was relatively unimportant.

Equality in cruiser tonnage would have been a different matter, not because there was any risk of war with America, but for the reason that, as a self-supporting nation, largely independent of imported food and other commodities, the integrity of the sea routes is less vital to her than to ourselves, and therefore a quota of cruiser tonnage adequate for her needs would necessarily be inadequate for ours. It is true that American naval critics are loth to concede this point, and continue to press for a "fifty-fifty" ratio in all combatant types. The fact remains, however, that Great Britain would be ill-advised to accept such a ratio unless it was based on her special requirements with regard to ships for the protection of trade.

In the United States itself the Treaty was received with popular applause, in which, however, the naval authorities did not share. The views of the latter were rather pointedly expressed in a subsequent speech by Mr. Denby, the Secretary of the Navy, who

declared that people in future would wonder how it came about " that the American nation ever thought of crippling this great right arm of diplomacy, this great protection of our people everywhere." The antecedents of the disarmament movement, and above all the insistence of the American public on naval retrenchment, were either forgotten or deliberately ignored, and currency was given to the legend that Britain had instigated the Washington Conference for the purpose of thwarting American naval expansion.

Japanese opinion was at first so bitterly hostile to the Treaty that the populace had to be restrained from preparing an unpleasant reception for the Japanese delegates on their return from Washington. But the impression that Japan had been unfairly treated by the other Powers did not survive a more careful reading of the naval agreement. The advantages it conferred on Japan were manifold and obvious. At a later date the Foreign Minister, Baron Matsui, said in an interview : " We are more than content with the Treaty. We intend to adhere to the spirit as well as to the letter of that compact, and hope it will be repeatedly renewed and continue indefinitely to form a bond of understanding among the naval Powers, insuring peace upon the seas." It is true, however, that the Privy Council, in approving ratification of the Treaty, placed on record its judgment that the ratio of ships apportioned to Japan was disadvantageous, and admonished the Government " to exercise greater care in the future."

France did not conceal her profound distaste for the Treaty, which she professed to regard as a betrayal of her interests. Such violent opposition was manifested in Parliament and Press that the fate of the covenant remained in doubt for many months. Eventually the agreement as to tonnage ratios was ratified, but the supplementary Treaty inhibiting submarine attack on merchant ships was never laid before Parliament. During the debate in the Chamber

of Deputies, M. Lémery, Reporter of the Naval Commission, protested against America's action in taking the state of the world's fleets in 1921 as the basis of future relative strength. He argued that the tonnage ratios ought to have been based on the standard of 1914, which represented a more normal division of power. Other speakers, including members of the Government, thought it unfair that France, who was by no means solely a Mediterranean Power, should be put on an equality with Italy. The Minister of Marine made one significant admission. Pointing out that the ratio system applied only to capital ships, he declared that had it been otherwise the French Government would not have signed the Treaty. M. Briand, the Prime Minister, who had represented his country at the Conference, confirmed this statement. "The Treaty of Washington refers only to capital ships," he said. "For light vessels and submarines it is the French view which has triumphed."

Italy's reception of the Treaty was wholly favourable. It formally confirmed her new status as a Sea Power of equal rank with France, though in actual fact her naval forces had never hitherto approached the French standard of strength. In this connection the Treaty, it must be confessed, has had an adverse influence, for it has imported a distinct element of naval rivalry into Franco-Italian relations.

It is now proposed to review the tangible results of the Washington Treaty alike from the political, economic, and strategic points of view of the different Powers. So far as Great Britain is concerned, the chief merit of the agreement is that it relieved her of the necessity of entering into a shipbuilding race with the United States, the political reactions of which none could foresee. The naval problem confronting her after the war was one of extreme complexity. On the one hand, her responsibility for the defence of the Empire compelled her to maintain a fleet at least equal in power to any other. Failure to provide such

a fleet would have endangered the integrity of the Empire, for if the Oversea Dominions could not look to their natural protector for aid in time of danger they might be tempted to seek it elsewhere. In the days when Great Britain had been embarrassed by determined rivalry in European waters, first from France and Russia in collaboration, and afterwards from Germany, she had endeavoured to reduce her naval commitments elsewhere by concluding an alliance with Japan. Under its terms the protection of British interests in the western area of the Pacific was virtually entrusted to Japan, of whose loyalty in discharging the obligation there was never any question.

But although the safety of the Oversea Dominions had furnished one of the principal motives of the alliance, they always looked upon it coldly, and eventually with unconcealed aversion. In 1921 the burning question for Great Britain was whether the alliance should be renewed or denounced. The former course involved possible friction with the United States, whose relations with Japan had reached a somewhat critical stage. True, a clause in the alliance, inserted at the instance of Great Britain, ensured her neutrality in the event of war between Japan and the United States; but this did not satisfy American opinion. That Great Britain should be the ally of an Asiatic Power with whom an armed conflict seemed by no means improbable was, apparently, a source of real anxiety to American statesmen.

Canada, for obvious reasons, shared the views of her neighbour on this subject. Her representatives at the Imperial Conference held in 1921 made it plain that under no circumstances would she be a party to the renewal of the alliance, and that if in spite of her protests it should be renewed, she would disclaim all responsibility for the act. Since that would have been tantamount to the political disruption of the Empire, which in matters of high policy must function as a

unit or not at all, the fate of the alliance was sealed from that moment. To blame Canada for her attitude in this matter would be unreasonable. With the United States she had ties both of sentiment and interest which she could not afford to imperil by taking a stand on the Japanese question which the former would resent. For a variety of reasons Australia and New Zealand also wished to see the alliance terminated. There was at this time a general belief among the Pacific communities that America and Japan would shortly come to blows. The Dominions which lay within the prospective zone of war were therefore anxious to sever an association with Japan which seemed to them incompatible with the preservation of strict neutrality. Had hostilities actually occurred, the position of Australia, New Zealand, and Canada would have been distinctly anomalous, for there is no question but that their sympathies would have lain with America, in spite of their being in formal alliance with her adversary.

Dominion views so far prevailed at the Imperial Conference of 1921 that the denunciation of the Japanese alliance was apparently agreed to by the Home Government, which originally had favoured renewal. But the Washington Conference gave us an opportunity of withdrawing gracefully from this engagement without affronting those who had been for so many years our loyal and steadfast allies. The Four-Power Treaty negotiated at Washington may in some measure be regarded as a substitute for the alliance. It binds the signatory Powers (the British Empire, the United States, France, and Japan) to respect each other's territorial interests in the Pacific, and in the event of a dispute arising out of any Pacific question to submit the issue to a joint conference for consideration and adjustment. "If the said rights are threatened by the aggressive action of any other Power, the high contracting parties shall communicate with one another frankly and fully, in order to arrive

at an understanding as to the most efficient measures to be taken, jointly or separately, to meet the exigencies of the particular situation." When ratifying this agreement the U.S. Senate made an important reservation, to the effect that the United States understood that there was "no commitment of armed force, no alliance, and no obligation to join in any defence." While in view of this proviso the Four-Power Treaty cannot be regarded as an effective safeguard against war in the Pacific, it is of value as a pledge that the Powers concerned will endeavour to compose future differences in that region by arbitrating between themselves before recourse is had to other methods.

To Great Britain, therefore, the outstanding political merits of the Washington treaties were that they checked the development of naval rivalry and at the same time enabled her to cancel an engagement to which her Daughter States took strong exception. The economic benefits she derived were also considerable. Had competitive shipbuilding proceeded without restraint she would have been compelled to build from two to three capital ships each year from 1921 onward, together with a proportionate number of cruisers and other ancillary craft. Dockyards and naval stations at home and abroad would have had to be extended to meet the requirements of the new fleet, and the annual charge for new ships, naval works, maintenance, etc., must soon have mounted to a formidable total. By now we should certainly have been spending at least £90,000,000 a year on the Navy, instead of only two-thirds of that sum.

The difference, however, does not by any means represent a net saving. Shipbuilding and kindred industries in this country have incurred heavy and irrecoverable losses in consequence of naval limitation, which is responsible in no minor part for the acute depression from which they have suffered in recent years. In former days naval contracts, British and foreign together, represented more than 25 per cent.

of all shipbuilding on the Clyde, nor was the percentage much, if at all, lower in other centres of this industry. That the highest interests of the nation are better served by naval limitation than by intensive competition in the building of warships goes without saying; nevertheless, the crippling blow which one of our greatest industries has sustained must not be ignored when estimating the extent of the sacrifice which Great Britain has made in the cause of disarmament.

From the strategic point of view we have gained definitely by the restriction of capital ship programmes. It has relieved us of the necessity of maintaining a great battle fleet in the Pacific and has not prejudiced our position in any other quarter, except the Atlantic, where, in view of our political relations with America, strategic problems have an interest more academic than actual. Thanks to the harmony of those relations, which the Washington treaties have done much to consolidate, we are free to concentrate our naval strength in the Mediterranean, where we now enjoy a very marked predominance in the heavier classes of tonnage. But for the Limitation Treaty it is conceivable that France or Italy, or both, would sooner or later have resumed the construction of capital ships, in which event our margin of superiority would have correspondingly diminished.

Turning to the United States, it seems obvious that she has gained political and economic advantages of the first importance. From her point of view, the supreme merit of the naval limitation treaty was that it averted the danger of war with Japan. That peril was more imminent in 1921 than is generally realised. Serious differences existed between Washington and Tokyo on such varied questions as the treatment of Japanese nationals in the United States, the "open door" in China, the status of certain ex-German islands in the Pacific, and, above all, the projected development of naval bases in the western sector of that ocean. Japan was straining every nerve to keep

pace with American naval expansion, and had grimly accepted the onerous financial burden which this policy entailed. Reserves of coal and oil-fuel were being quietly accumulated at the naval ports. With the aid of Government subsidies, shipyards and munition plants were being extended. Efforts were made to increase the normal stocks of naval ammunition—powder, shells, torpedoes, and mines—by developing domestic manufactures and drawing upon foreign sources of supply. The coast defence system was to be modernised, and new fortified bases were planned at outlying islands.

The only conclusion to be drawn from these extensive preparations is that Japan anticipated war in the near future. That she would have made the beginning of work on the new American bases at Manila and Guam a *casus belli* is the firm belief of many observers who were in the Far East at the time. Be that as it may, the continuance of naval rivalry between the two countries, associated as it was with grave political differences, must sooner or later have produced a situation inimical to peace. The prospect was not one that the United States could regard with equanimity. In spite of the formidable strength of her navy, it was in no condition to wage a campaign overseas. The lack of bases would have prevented it from operating at any great distance from the American coast, and for this reason it could not have intervened to save the Philippines had Japan attempted to seize them. Though the overwhelming superiority of the United States in all material resources would doubtless have enabled her to prevail in the end, the struggle must have been protracted and exceedingly costly in blood and treasure. To put an end to this thoroughly unsatisfactory state of affairs was the urgent desire of America's political leaders, and it undoubtedly furnished their strongest motive for summoning the Conference at Washington.

Thanks to the treaties for naval limitation and the

settlement of Pacific questions, not only was all immediate danger of war removed, but the possibility of that danger recurring at some future period was sensibly diminished. Before the Conference, as we have seen, reciprocal measures were being taken to overcome the physical obstacles which rendered a meeting between the two fleets all but impossible. Since Hawaii, the westernmost American naval base, was 3375 miles from Yokosuka, the most easterly Japanese base, there were no apparent means by which the rival fleets could be brought into contact, having regard to the very limited radius of modern warships. But America was preparing in 1921 to convert the island of Guam into a great war haven, and at the same time to equip the arsenal of Cavite, in the Philippines, with docks and magazines for battleships. As Cavite was 1740 miles from the Japanese coast and Guam only 1360 miles, modern base facilities at these two points would have enabled the American fleet to conduct operations in Japanese waters. Japan, on her side, was hastily fortifying the Bonin Islands, which lie only 800 miles to the north of Guam. Had these plans reached maturity the distance separating the two fleets would have been reduced by three-fourths, thus rendering a decisive encounter perfectly feasible.

But the agreement to maintain the *status quo* as to Pacific bases has restored the strategic situation that existed previously. The value of this compact as a deterrent to war far outweighs the restricton of battleship tonnage. So long as it remains operative the potential war harbours at Guam, Cavite and Port Lloyd (in the Bonin Islands) cannot be built. This means that the American and Japanese battle fleets are again divided by a vast stretch of ocean, which in the absence of friendly bases neither can traverse under war conditions. It is therefore no exaggeration to say that the Washington negotiations probably saved the United States from a great war and its attendant tribulations.

She was further spared a vast expenditure on naval armaments. Speaking in the House of Representatives in March, 1924, the chairman of the sub-committee on appropriations said : " The Limitation of Armaments Conference, referring to the navy alone and omitting fortification programmes in the Philippines and Guam, not only meant a saving to the American people of approximately £40,000,000 for the construction of eleven capital ships, but an annual saving in the maintenance of the fleet of from £40,000,000 to £50,000,000." Impressive as they are, these figures do not reveal the full extent of the economies effected. Completion of the original shipbuilding programme would have necessitated the enlargement of existing naval dockyards and stations and the provision of new yards on the Pacific coast. Plans to this end, involving a huge expenditure, were already being considered. Naval limitation saved the United States hundreds of millions sterling.

On the other hand, it is claimed, her strategic situation has been adversely affected. In renouncing the construction of oversea bases she has lost the means of defending her territories in the Western Pacific. The security of the Philippines must depend henceforth on the goodwill of Japan rather than on the power of the American navy. Even in this case, however, the sacrifice seems to be more apparent than real. It is true that previous to the limitation agreement America was free to create naval bases in the Philippines and at points adjacent thereto; it is true, also, that the existence of such bases would have enabled her to give adequate protection to these territories. But whether they could have been built without provoking the active hostility of Japan is another question.

The exposed position of the Philippines had been obvious from the first, yet twenty years elapsed before the United States began seriously to contemplate measures for their defence. This was the more remark-

able in view of the fact that during that period relations with Japan were strained. How serious the tension became at times has since been revealed by Mr. Franklin Roosevelt, a former Assistant Secretary of the U.S. Navy. "Outside the executive departments at Washington" (he wrote) "it has never been known in this country that, during ten nervous days in the early summer of 1908, the United States hovered on the edge of an ultimatum from Japan." Under these circumstances the delay in providing for the naval protection of the Philippines must be ascribed to reasons other than those of economy. In any case, America's strategic situation in the Pacific remains precisely what it was before the Conference, for at that time little or no progress had been made on the new bases at Cavite and Guam, and the funds which Congress had voted would not have sufficed to cover more than the preliminary operations.

Moreover, against the strategic handicap imposed on the United States Navy by the loss of prospective oversea bases must be set the gain in relative power which has accrued to it from the restriction of the Japanese fleet. Had the shipbuilding programmes of 1921 been carried to completion, the two navies by now would have been approximately equal in post-Jutland tonnage. Thanks to the Washington agreement, however, the United States is assured of a two-fifths superiority over Japan in this class of vessel and is also absolved from the necessity of making further shipbuilding efforts. This very substantial gain is commonly ignored by American critics of the Treaty.

Japan, too, has reaped many important advantages. On the political side she was required to make certain concessions which nominally weakened her position in China, though it is doubtful whether her status there has been materially affected. Now, as before, she has a controlling voice in the political and economic affairs of those Chinese provinces which lie within the sphere of foreign influence. Nor can it be said that

her prestige in the concert of nations has suffered injury. On the contrary, it has been increased by her formal recognition as the third Naval Power of the world, a rank which she could have maintained only by arduous effort and an expenditure disproportionate to her income. Japanese economists estimate that the completion of the " eight-eight " building programme from the stage it had reached at the date of the Washington Conference would have cost an additional £110,000,000, without counting maintenance charges. She was simultaneously engaged on a far-reaching plan for the modernisation of dockyards and the creation of insular bases, which was expected to absorb at least £20,000,000. It would also have been necessary to expand the arsenals, training depôts, and other shore establishments *pari passu* with the growth of the fleet. Taking all these items into consideration, it is clear that the total cost of the navy when it had reached its full strength would have been enormous. In a few years, it was estimated, naval expenditure would be absorbing 40 per cent. of the total revenue of the State. As a further 20 per cent. had to be written off for army requirements, Japan had to face the prospect of spending no less than 60 per cent. of her income on armaments.

One cannot but admire the spirit of a people that did not shrink from undertaking this appalling burden in the interests of national defence. It already involved heavy taxation and the curtailment of other public services, including education and communications. Whether the country could, or would, have endured these sacrifices indefinitely is by no means certain. The campaign for retrenchment launched by Mr. Yukio Ozaki, the erstwhile Liberal leader, was gaining support on all hands, and the Government found increasing difficulty in piloting its naval estimates through Parliament. The social unrest so prevalent in Japan at this period was officially attributed to Communist propaganda, but it was certainly

due in part to the heavy imposts and the high cost of living, for both of which the lavish expenditure on armaments was indirectly responsible. "If the limitation compact saved other countries from bankruptcy," wrote one observer, "it probably saved Japan from domestic strife which might have culminated in revolution." At least we may say that the economic reactions of the earthquake catastrophe which occurred two years later, serious as they were, must have been far more serious had the national treasury been depleted by prodigal expenditure on the armed forces.

With regard to the strategic benefits which Japan has derived from the naval treaty, an independent witness may be quoted. In a paper contributed to the *Marine Rundschau* of June, 1925, Dr. F. W. Mohr, a German authority on Pacific questions, wrote as follows: "Japan must be acclaimed the real victor of the Washington Conference, a fact which is seldom realised or appreciated. It had long been clear to the statesmen of Tokyo that the alliance with Great Britain was approaching its end. Even if it survived there was no chance that Great Britain would take sides with Japan against the United States. The idea of a Four-Power Treaty for the regulation of Pacific questions was therefore cordially approved by Japan, if it did not originate with her. As a result of this Treaty, Japan, by astute diplomacy, and without receding an inch from the aims which she has set herself to achieve at the proper moment, has gained ten years of security and peace, in which to bring her fighting equipment up to modern standards. The observations of her military agents on the battlefields of Europe, and of her leaders in the Siberian expedition, revealed the shortcomings of the Japanese army, particularly in the technical services, and the inadequacy of existing defence arrangements. They saw clearly that Japan, with the military experience and the equipment she then possessed, could not hope to hold her own against fighting forces trained and

accoutred on the latest European system. Consequently, at the end of the war she applied herself with feverish energy to the task of renovating her naval and military equipment. The Four-Power Treaty leaves her free to continue the work without fear of interruption. And she has gained this breathing-space without any sacrifice of security. Article 19 of the Naval Treaty, which forbids the development of Pacific naval bases and thus leaves British and American territories in that ocean defenceless for the next ten years, has in no wise circumscribed Japan's powers of aggression. In anticipation of the Disarmament Conference, and with a shrewd perception of the course it would take, she caused the naval works then in progress at the Bonin Islands, at Amami-Oshima (immediately north of the Loochoo Islands), and at other advanced insular bases to be so accelerated that when the conference met they were practically completed. As a result, Japan's ability to take the offensive or assume the defensive, whichever the case may be, has not been affected by the Limitation Treaty—so far, that is, as the essential factor of base facilities is concerned. Furthermore, the ex-German South Sea islands of which she is mandatory form a protective girdle which would be of immense value to her fleet in resisting an American naval attempt to reach Guam and Manila at a critical period."

Although this theory that Japan is making use of the naval truce to increase her potency for war probably does her an injustice, it is a fact that her strategic position has been vastly improved by the Washington treaty. Humanly speaking, it has rendered her invulnerable to seaward attack. From north to south her maritime frontier runs from the Kuriles to Formosa, and there is scarcely a point along this extended line at which she would be unable to bring the whole weight of her naval strength to bear. If coastwise lights were extinguished and navigation marks removed, the passage of this barrier would become

highly dangerous to enemy shipping, even if the Japanese fleet remained inactive. But in view of the absence of properly-equipped local bases it is difficult to see how any hostile force could penetrate so far. Apart from Hong-kong, which for obvious reasons may be ignored, the nearest foreign naval stations are those at Hawaii and Singapore. The former is 3375 miles and the latter 1625 miles distant from the nearest Japanese territory. Roving cruisers and large submarines might get within striking distance of the Japanese coast, but for battleships it lies out of bounds. For this reason the limitation of her battle fleet is of minor strategic consequence to Japan. The ten capital ships which she retains constitute a " fleet in being " quite powerful enough to deter an enemy from risking his heavy ships in waters devoid of facilities for repair and replenishment, or even for secure anchorage, and where, moreover, they would be in constant peril of mines, torpedoes, and aircraft.

There are strategists in America who talk seriously of blazing a war trail across the Pacific by using their battleships as floating bases until such time as Japanese islands were conquered and occupied. Thus in 1925 the commanding officer of the United States Marines, after explaining to members of Congress that the primary war-time function of his corps was the seizure of bases for the fleet, proceeded to say : " On both flanks of a fleet crossing the Pacific are numerous islands suitable for use by an enemy as radio stations, aviation, submarine, or destroyer bases. All must be mopped up as progress is made."

That the operations here foreshadowed might be possible is not disputed. They would, however, demand an expenditure of time and effort beyond calculation, particularly as the Japanese, being fully apprised of the danger, might be trusted to take all precautions within their power. Using as advanced bases the numerous islands which flank the line of approach, their light forces could dispute the advance

at every stage west of Hawaii. Heavy losses would probably be incurred by the American expedition before reaching its first objective, and on coming within a radius of 1000 miles from the Japanese coast it would be liable at any moment to attack by the Japanese battle fleet at full strength. The hazards of such an expedition are so well understood by American strategists that it is exceedingly doubtful whether they would sanction it save under pressure. Nevertheless, it would offer the only alternative to a stalemate which left Japan in undisputed mastery of the Western Pacific and of the American territories in that region, and therefore the apparent victor in the struggle, unless or until her powers of endurance were overborne by the superior weight of America's economic resources. On the whole, therefore, Japan may be said to enjoy a larger degree of security under the Limitation Treaty than she would otherwise have gained, even if the " eight-eight " programme had been completed.

The contention of American critics that their country made the heaviest sacrifice from the strategic point of view is thus sustained, though it was the sacrifice of a potential rather than an actual advantage. On the other hand, she has gained very materially in the floating elements of naval strength as against Japan. It has already been shown that the building programmes in train before the Conference would ultimately have brought the two navies to parity in post-Jutland tonnage. Thanks to the Treaty, however, the United States now has a two-fifths superiority in battleship power. In reality her margin is even greater than the tonnage ratio indicates. This is made clear on comparing the heavy guns mounted in the two fleets as they exist to-day :

	U.S. Fleet.	Japanese Fleet.
16-in. guns . . .	24	16
14-in. guns . . .	124	80
12-in. guns . . .	44	0
	192	96

The American total of big guns is seen to be exactly twice as large as the Japanese. In the heavier calibres, 14-in. and 16-in., America has a preponderance of fifty-two. Her 12-in. guns are by no means a negligible asset, for German weapons of this calibre did great execution at Jutland. Moreover, twenty-four of these guns are of a high-velocity model, with a range exceeding that of the 14-in. piece. A comparison of the larger weapons reveals a further American gain. Whereas all the 14-in. guns in the Japanese fleet are 45 calibres in length, sixty American pieces of the same bore have a length of 50 calibres, which means that they are superior in range and destructive power. As for the ships themselves, those of the American fleet are collectively of later design than the Japanese. True, the four oldest American ships antedate every Japanese unit, but of ships built since 1912 America has ten and Japan but five. Speed is the only factor in which the Japanese vessels are superior. The six battleships can steam at 22 to 23 knots, and the four battle-cruisers at 27½ knots, while the swiftest American ship cannot exceed 21 knots.

The fact that Japan has four battle-cruisers and America none is held by some observers to confer an important tactical advantage on the former. It should not be overlooked, however, that these battle-cruisers, which were designed as long ago as 1911, are deficient in protection. Their belt armour is only 8-in. thick, and therefore penetrable by heavy guns at long range, while the plating on the gun-turrets and over machinery and magazine spaces is below the minimum strength now considered essential. Consequently, these four ships are extremely vulnerable to gunfire, a weakness that detracts from their tactical value. If they ventured within range of modern battleship artillery they would court the fate that overtook the lightly-armoured British battle-cruisers at Jutland.

CHAPTER IX

THE SPIRIT OF THE TREATY

It was but natural that naval restriction should be greeted more warmly by the civilian communities to whom it brought financial relief than by members of the profession whose power and influence it tended to circumscribe. Probably there were few sea officers in the countries concerned who felt any real enthusiasm for the Treaty. To thousands of them it signified the abrupt termination of a career to which they had devoted their lives, for the wholesale deletion of ships had perforce to be accompanied by an equivalent reduction in man-power. Exception was also taken to the Treaty on patriotic grounds. To the British naval officer it was no light thing that his country should formally renounce that primacy afloat which he had been taught to regard as vital to her existence. To the American naval officer, who had looked forward with pardonable pride to the day when the United States fleet should rule the seas, the Treaty came as a tragic anti-climax. To his Japanese *confrère* it seemed as if Nippon had yielded up the keys of her defence, for the strategic advantages she had gained were not at first appreciated at their true value.

Although the Washington Conference had been summoned by the President of the United States with the full approval of the nation, and despite the fact that the main provisions of the Naval Treaty, as subsequently signed and ratified, were drafted by the United States Government, criticism of the Treaty has been more persistent and vehement in America than elsewhere, with the possible exception of France.

Almost before the ink was dry on the document complaints were being raised that America had made a bad bargain in surrendering potential domination of the sea. Even the Secretary of the Navy publicly expressed astonishment that the American people should have " crippled this great right arm of diplomacy." It was first hinted, then openly asserted, that Britain and Japan, but the former in particular, had hoodwinked the guileless American delegates into signing away a fleet of battleships which would not only have rendered the country safe from aggression, but enabled it to preserve peace in every quarter of the globe. Nothing was said of the fact that the scrapping of these ships had been proposed originally by the United States herself, or that Britain and Japan respectively had also made sacrifices in the cause of peace and disarmament. Thanks to skilful propaganda a large section of the American public was induced to believe that the Washington Conference had been engineered abroad for the express purpose of checking the growth of American sea power.

In American naval circles the Treaty was opposed for two main reasons : first, it involved the abandonment of all overseas fleet bases except Hawaii; secondly, complete naval equality with Britain had not been attained, in spite of the tremendous sacrifice of capital ship tonnage which the United States had made. Since Britain, it was argued, retained a definite superiority in cruisers, and numerous bases along the ocean routes endowed her fleet with a strategic mobility to which none other could aspire, she still remained the supreme Naval Power. Thus the underlying purpose of the Washington Conference had been stultified, and America had scrapped the mightiest battle fleet in the world without gaining any recompense. This entirely misleading version of the Conference and its results was accorded the widest publicity. It was certainly not very flattering to the statesmen and distinguished naval officers who had

looked after American interests at the Conference, and who were now represented as having been the easy dupes of their more subtle and less scrupulous colleagues.

What rankled most in the American naval mind was the loss of the projected bases at Manila and Guam. For reasons already elucidated, the United States, by renouncing the right to develop these *points d'appui* on modern lines, accepted a grave strategic handicap in the Pacific. Nevertheless, she did so voluntarily, and not as the result of foreign intrigue. Japan, it is true, intimated her resolve not to accept battleship limitation unless these bases were left *in statu quo*, so that the United States had to choose between acceptance of this demand or the complete breakdown of the Conference. Surely the fact that she accepted it is clear evidence that, in the judgment of her able representatives at the Conference, the political and economic benefits of tonnage limitation outweighed the loss of strategic power which forfeiture of the oversea bases involved. It was, in any case, too late for protest. The Naval Treaty was an accomplished fact, and short of denouncing it, the United States, in common with other signatory Powers, was pledged to observe its provisions. The large majorities by which it was ratified in Congress and the almost unanimous approval of the Press showed that the American people, with the exception of the naval service, were well satisfied. Yet the dissentients, although comparatively few in number, continued their campaign against the Treaty with such effect that the public began to wonder whether the United States had, after all, secured a " square deal."

Towards the end of 1922 a more definite issue was raised. In December of that year the Naval Committee of the House of Representatives addressed to President Harding a request that he should summon a new naval conference for the purpose of restricting war vessels of less than 10,000 tons. It was declared

that certain nations were already preparing large programmes of "auxiliary" construction which, if allowed to mature, would compel the American Government to take similar measures in order to maintain the balance of strength. As Great Britain up to that time had laid down only one cruiser, the statement obviously had reference to Japan and France, both of which were actively engaged in the construction of vessels not limited by the Treaty.

In the course of the debate on Dec. 14, 1922, questions were put as to what progress had been made in carrying out the terms of the naval agreement. Mr. Kelley, as chairman of a sub-committee dealing with naval affairs, replied that he did not think any nation had discarded any of its ships, "although Great Britain has possibly scrapped some of her old ships which she had already begun to scrap before the Conference." "In other words, there have been no results from the Limitation Treaty, thus far?" queried a member. To which Mr. Kelley answered, "No." The source of this information was revealed by a contemporary Press message from Washington, as follows: "Neither the United States nor any other country signatory to the Naval Treaty has begun the scrapping of warships provided for in that Treaty, so far as the Washington Government is aware. It was said to-day at the Navy Department that the only aspect of the Treaty already brought into force was the suspension of new capital ship construction in the United States and Japan. The scrapping of warships, which has been proceeding in Great Britain, Japan, and the United States, it was explained, has affected only vessels which are formally classified by each Power as wholly obsolete for naval purposes."

This statement was so patently at variance with the facts that it drew a rejoinder from the British Embassy at Washington. Although the information communicated to the Press was alleged to have come from the Navy Department, the Embassy found it difficult

to believe this, because the Navy Department, two months previously, had been officially apprised by the British Government of the facts relating to the scrapping of British warships, and those facts, as said, were wholly at variance with the Press message which the Department was said to have inspired. It should be added, however, that no disclaimer was issued by the Department.

The truth was that Great Britain had not waited for the ratification of the Treaty before proceeding to scrap those of her ships, twenty in number, which it condemned. By December, 1922—that is, less than a year after the Conference—she had already sold seventeen of these vessels to shipbreaking firms and two more had been disarmed and otherwise made unserviceable, thus leaving only one ship still effective. So far from being " wholly obsolete for naval purposes," as Congress and the American Press had been told, all these nineteen vessels were Dreadnoughts which, in the ordinary course of events, would have been kept on the active list for years to come. In general fighting efficiency the oldest vessels of the group were but little inferior to ships retained in the post-Treaty fleets of the United States, France, and Italy, while the newest were in every way superior. Two had been completed as recently as 1914 and five were armed with 13·5-in. guns, whereas the United States had thought it worth while to retain several ships mounting only 12-in. guns, as also had France and Italy. By the end of 1922 Great Britain had therefore scrapped all save one of the twenty effective capital ships which the Treaty required her to discard. She had done this well in advance of the stipulated date, in order—as a member of the Government said in Parliament at the time—that " this country should give a lead in good faith and to show that it is our intention to carry out, in the spirit and the letter, this great Treaty for the limitation of armaments."

Up to this time neither the United States nor Japan

had disposed of a single effective ship, and it was evident that they intended to await ratification of the Treaty before proceeding to carry out its provisions with regard to the scrapping of tonnage. In the circumstances then prevailing their attitude was reasonable and prudent. Candour compels the admission that Great Britain incurred no particular risk in discarding her condemned ships long before she need have done so. No potential enemy was in sight, and she was on excellent terms with the only two Powers whose naval armaments were at all formidable. For America and Japan, however, the position was different. Having been rivals for some years, neither could afford to ignore the naval strength of the other. Pending ratification the Treaty was, in the literal sense, a scrap of paper, and for a time it seemed more than possible that France would decline to ratify the instrument, in which case it would have remained null and void. With this contingency in view it was natural enough that each of the only two Powers between whom any semblance of naval competition existed should hesitate to weaken its fleet before reciprocal action was assured.

When eventually the Treaty was ratified, each carried out its obligations in this respect with a thoroughness that left nothing to be desired. The same motives that prompted the United States to delay the scrapping of its ships until the Treaty had become operative would account for the reluctance of the Navy Department to acknowledge, in December 1922, that Great Britain had already got rid of nineteen effective capital ships. To have done so might have invited awkward questions, which could not have been answered without detriment to the friendly relations with Japan which were then in process of cultivation.

Meanwhile another and more serious naval issue cropped up between Britain and America. The American naval budget for 1923–24 contained a grant of £1,300,000 for increasing the angle of elevation,

and therefore the shooting range, of the turret-guns in thirteen battleships. Congress, it was discovered, had appropriated this money after hearing from the Navy Department that Great Britain was already altering the gun-mountings in her battleships to give them an increased range of fire. The Department pointed out that unless America took similar action without delay her fleet would find itself out-ranged by the British and thus placed at a tactical disadvantage, which would be contrary to the purpose of the Treaty. Upon learning of the matter the British Government at once notified Washington that the Navy Department had been misinformed. In no British capital ship, it was stated, had the guns or their mountings been modified in any way since being installed, nor was there any intention of making such alteration. The Department, it appeared, had been misled by an erroneous report in a non-official British text-book, to the effect that the gun-mountings in British battleships had been altered since the war to give increased range.

Previous to the British disclaimer a good deal of capital was made out of this inaccurate statement. American naval officials informed the Press that the effect of " the British post-war improvements " was to give the entire British battle fleet a range of 30,000 yards, against a maximum of 20,000 yards for all American battleships except five. " Opposed to the modernised British fleet of to-day, the bulk of the American fleet would face the necessity of closing in five miles under salvo fire before it could bring its guns to bear. As the British ships are also slightly faster, the possibility of bringing the entire American fleet into action would be negligible." Similar statements were reported to have been made to Congress when the vote for gun elevation was under consideration. In view of the British Government's denial that the armament of its battleships had been modified, the American Executive decided not to

proceed with the gun elevation plan, and the money voted for this purpose was held in abeyance.

The Navy Department, however, continued to urge the necessity of the proposed change. Admitting that it might have been misinformed as to British action, it nevertheless contended that the ratio of naval strength prescribed by Treaty could not be maintained unless American battleships were enabled to use their guns up to the maximum range of British vessels. Copious statistics were compiled to demonstrate the British advantage in this respect and the hopeless plight of the American fleet if it were ever called upon to fight under such conditions. A regrettable feature of the agitation was the drawing of invidious comparisons between the two fleets, and the tendency, unavoidable in the circumstances, to match them one against the other on paper, as though they were destined to engage in actual combat at some future period.

The proposed increase in the elevation of turret-guns was only one item in an extensive programme for the modernisation of the older American battleships, in order to improve their general fighting efficiency. They were to be fitted with extra armour-plating and anti-torpedo bulges, while the six ships that burned coal were to be equipped with oil-fired boilers. According to the American view, none of these alterations conflicted with the Treaty clauses which governed the reconstruction of ships retained in the various fleets, and which were worded as follows: "No retained capital ships or aircraft-carriers shall be reconstructed except for the purpose of providing means of defence against air and submarine attack, and subject to the following rules:—The contracting Powers may, for that purpose, equip existing tonnage with bulge or blister or anti-air attack deck protection, providing the increase of displacement does not exceed 3000 tons displacement for each ship. No alterations in side armour, in calibre, number, or

general type of mounting of main armament shall be permitted." France and Italy, however, were specially empowered to improve the armour protection of their completed ships and re-arm them with 16-in. guns, if they so desired; while Great Britain was authorised to complete the reconstruction of H.M.S. Renown which had been initiated previous to the Conference.

It will be seen that the passage relating to gun armament is rather ambiguously phrased. In the French version of the Treaty, changes in the " calibre and number of guns in the main armament, as well as all changes in its general plan of installation," are disallowed. Hence the point to be determined was whether a modification in the elevating gear of the turret-guns would infringe these rules. It would necessitate the following work: (1) increasing the size of the gun port, (2) lengthening the elevating screw to enable the breech of the gun to be lowered and raised through a greater arc, (3) cutting away plates and framing under the breech of the gun, (4) changing the position of the ammunition hoists, and (5) fitting a more powerful system of counter-recoil gear. Whether such changes would constitute an alteration in " the general type of mounting," or in its " general plan of installation," was a question which none but ordnance experts were competent to decide. It was not surprising that American experts should take the negative view.

British opinion, on the other hand, regarded the changes as inadmissible. It was announced in Parliament on July 30, 1924, that representations had been made to the United States and Japan, as signatories to the Washington Convention, that the alteration of the elevation of capital ship guns, or expenditure for the purpose of increasing the radius of action of the ships themselves, would be, in the opinion of His Majesty's Government, a breach of the Convention. Some weeks previously (April 14)

Mr. Ramsay MacDonald, then Prime Minister, had stated in the House of Commons that the proposal to convert American coal-burning battleships to oil-fuel would, he believed, represent an infringement of the Treaty. It was assumed that his naval advisers had informed him that the conversion would increase both the speed and the steaming endurance of the ships. So far as it related to this particular question, the British Government's protest was unavailing. Congress approved the conversion of six battleships to an oil-burning basis, and the work was duly begun.

With regard to gun elevation the American Government, while declining to accept the British interpretation of the Treaty rules, vetoed the proposed changes on the ground that they might stimulate a new competition. No departure has since been made from this attitude, but American naval interests have continued to labour the point, and the Navy Department itself, judging from statements by Mr. Wilbur, the Naval Secretary, and his predecessor, Mr. Denby, is committed to the policy of increased gun elevation, which it holds to be indispensable to the efficiency of the fleet.

The one definite fact which has emerged from the mass of conflicting testimony adduced is that the American fleet's inferiority in gun range, as compared with the British fleet, is less marked than the original figures indicated. That a disparity should have existed at all was due not to policy but to fortuitous circumstance. British battleships built before 1908 had a uniform gun elevation of 15 degrees. In that year a new type of high-velocity 12-in. gun was adopted for the ships of the " St. Vincent " class, the maximum range of this weapon, at the angle of elevation stated, proving to be over 20,000 yards. When a few years later the 13·5-in. gun was introduced for the first group of super-Dreadnoughts, it was found necessary to provide for a higher angle of elevation in order to give this gun, with its lower

muzzle velocity, a range equal to that of the 12-in. piece as mounted in the " St. Vincents." Accordingly the gun-mountings in the " Orion " class and all later vessels were designed for an extreme elevation of 20 degrees. As guns of still greater power came into use the average range of the British fleet naturally tended to increase, though little importance was attached to this before the war in view of the conviction that accurate shooting beyond, say, 14,000 yards was not possible.

War experience showed, however, that effective shooting could be made at much greater ranges than had been deemed practicable. In several of the naval engagements hits were scored at 18,000 yards, and there seemed to be no reason why, with improved fire-control methods, the big guns should not occasionally strike the target at a distance of 25,000 yards, or even more. With aircraft observing the fall of projectiles, even indirect firing up to 30,000 yards might become possible in favourable circumstances. The angle of elevation at which the guns can be fired has thus become a factor of considerable importance. In the British ship Hood, begun during the war, and presumably in the new battleships Nelson and Rodney the angle was increased to 30 degrees, but with these exceptions all the guns of capital ships in the British post-Treaty fleet have a uniform elevation of 20 degrees. In the American Navy, which had always favoured long guns of high muzzle velocity, the maximum firing angle had been standardised at 15 degrees, this being deemed adequate for all practical purposes. But after the Battle of Jutland had demonstrated the value of long-range firing the American authorities decided to give the main armament of their future ships an elevation of 30 degrees.

The heavy guns of the two fleets as they exist to-day are compared in the following table, the range figures being official except in the case of the Nelson and Rodney :

BRITISH FLEET.

Name of ship.	No. of guns.	Diameter of bore, inches.	Length in calibres.	Maximum elevation, degrees.	Extreme range, yards.
Rodney	9	16	(?)	30(?)	34,000(?)
Nelson	9	16	(?)	30(?)	34,000(?)
Royal Sovereign	8	15	42	20	24,300
Royal Oak	8	15	42	20	24,300
Revenge	8	15	42	20	24,300
Resolution	8	15	42	20	24,300
Ramillies	8	15	42	20	24,300
Queen Elizabeth	8	15	42	20	24,300
Warspite	8	15	42	20	24,300
Barham	8	15	42	20	24,300
Valiant	8	15	42	20	24,300
Malaya	8	15	42	20	24,300
Hood	8	15	42	30	30,300
Renown	6	15	42	20	24,300
Repulse	6	15	42	20	24,300
Tiger	8	13·5	45	20	23,800
Iron Duke	10	13·5	45	20	23,800
Marlborough	10	13·5	45	20	23,800
Benbow	10	13·5	45	20	23,800
Emperor of India	10	13·5	45	20	23,800

UNITED STATES FLEET.

West Virginia	8	16	45	30	32,600
Colorado	8	16	45	30	32,600
Maryland	8	16	45	30	32,600
California	12	14	50	30	35,500
Tennessee	12	14	50	30	35,500
Idaho	12	14	50	15	24,000
New Mexico	12	14	50	15	24,000
Mississippi	12	14	50	15	24,000
Arizona	12	14	45	15	21,000
Pennsylvania	12	14	45	15	21,000
Oklahoma	10	14	45	15	21,000
Nevada	10	14	45	15	21,000
New York	10	14	45	15	21,000
Texas	10	14	45	15	21,000
Arkansas	12	12	50	15	24,350
Wyoming	12	12	50	15	24,350
Florida	10	12	45	15	21,825
Utah	10	12	45	15	21,825

The British fleet, it will be seen, has only three ships with a range of 30,000 yards and over, while the American fleet has five. On the other hand, the former could develop a superior volume of fire at any range between 22,000 and 24,000 yards, as twenty of its ships would then be in action against only ten American ships. Whether this loss of gun-power at the range stated would impose a fatal tactical handicap on the American fleet is a debatable point. That it might do so if conditions of visibility were such as to favour shooting at very long range is undeniable, nor can it be disputed that the higher collective speed of the British ships would enable them to select and maintain the range at which the action was to be fought. In view of these facts the American naval authorities have a good case for increasing the gun elevation in their older ships, provided it can be done without infringement of the Treaty. Their strongest argument is, perhaps, that the Treaty assumes as between the two battle fleets an equality in fighting strength which does not now exist and cannot be attained until the range of their guns is equalised.

The matter is obviously one for adjustment by mutual agreement, and it is surprising that no steps should have been taken to bring this about. A committee of naval officers representing the five Powers concerned, diluted if need be by a civilian element, should have no difficulty in finding a satisfactory solution to this and other technical problems which the Treaty has left open. So long as those problems remain unsettled we must reckon with a continuance of propaganda by interested parties, some of whom are obviously more concerned to create ill-will between friendly nations than to promote naval efficiency. A public rendered uneasy as to the state of its defences is ready to accept sensational rumours which in calmer moments it would discredit.

For several years past the American public has been supplied with biassed and misleading versions of what

transpired at the Washington Conference and the results of naval limitation. Many of those to whom it looks for guidance on such matters have assured it that the American navy was "betrayed" at the Conference and has since been in a condition of progressive decay. The British Government's note on the gun elevation issue in 1924 seemed to give an impetus to this propaganda. Wide publicity was accorded to charges of British chicanery. It was alleged, for example, that the new vessels Nelson and Rodney, although ostensibly planned as battleships, were in fact heavily-armed aircraft-carriers, the design of which violated Treaty rules. Notwithstanding its manifest absurdity this rumour was taken up by certain members of Congress, who importuned the State Department to demand an explanation from the British Government. It must be owned that the atmosphere in which these ships were built, and the British Admiralty's secretiveness with regard to all new construction, did much to encourage false reports.

Another canard seized upon by advocates of gun-elevation related to a supposed British device for increasing the range of naval artillery. It formed the theme of a letter addressed by one American naval officer to another—both on the active list—the contents of which were divulged to the Press, apparently with the writer's permission. "About two years ago" (wrote Captain ——) "we had an enlisted man on board one of the 'Red' battleships during their (the British) fleet practice. By flooding their blisters they fired at 30,000 yards. Their 15-in. gun ships are not so fitted. We have only five ships that can fire at that range. However, when we confronted them with this information we had obtained they answered that they hoped we would not fit our ships with blisters. They admitted then having held a practice, but said it was an unsuccessful experiment; that blisters were good only as a protection against

mines and torpedoes; but they did not say that by flooding them they got an increased gun elevation. And what is of far more importance they place their deck armour at an angle that makes their ships non-penetrable at much greater range. And the joke is that the Department has swallowed it all. The correspondence is all in the archives here. As I said before, this is all secret. It should be known, and I cannot see why most of it should be secret."

A second letter was made public in which the writer, also a naval officer, said: "We were sold out at the Washington Conference. You should have heard what a participant has to say. You should read the confidential records in the archives here and what the General Board and the naval experts recommended, and what Mr. Hughes drew his red pencil through."

But for the fact that the writers' names were published, and that a Court of Enquiry was appointed to investigate "the disclosure of certain confidential information" it would be difficult to believe that these extraordinary letters were penned by naval officers. There is, of course, nothing new in the device of heeling a ship to give her guns a greater angle of elevation. It was practised during the war by ships bombarding hostile positions, and Admiral Sir Reginald Bacon, in his book, *The Dover Patrol*, published in 1919, not only mentioned the fact but reproduced a photograph of an old battleship firing her guns in this position.

The method, however, is only practicable for ships that are either stationary or moving at a low speed. For several reasons it could not be employed by ships in the battle line. First, the list would render them difficult to steer; secondly, if their own or the enemy's course were altered, their guns would not bear on the target until the heel had been corrected by transferring water, or oil-fuel, from the compartments on one side of the ship to those on the other, an operation that would take time; thirdly, owing to the armour belt

being raised out of the water on the side facing the enemy, the vitals of the ship would be exposed to the smallest shell. For these reasons alone it is in the last degree improbable that any admiral in presence of the enemy's fleet would cause his ships to be canted over merely to secure a momentary advantage in gun-range. To do so would be to court disaster. Finally, if the method were of practical value, it could be adopted with equal facility by battleships of the American or any other navy, all of which are fitted with wing compartments and flooding arrangements by means of which the vessel can be given a list to port or starboard at will. As these facts are well known to the merest tyro, the conclusion is irresistible that the letters quoted above were written with the sole object of alarming the American public and thus gaining its support for naval expansion.

To the same motive must be ascribed a theatrical attempt, in November, 1924, to save the battleship Washington from being sunk in accordance with Treaty rules. An injunction was sought in the courts by a private individual to restrain the Navy Department from destroying this vessel, on the grounds that the American fleet, owing to non-observance of the Treaty by foreign Powers, was below the prescribed standard of relative strength. The application was, of course, dismissed, the judge before whom it was heard ruling that there was " no equity in the plaintiff and no jurisdiction in this Court." Mr. Wilbur, the Naval Secretary, ignored those passages in the plaintiff's argument which dealt with Great Britain's alleged violations of the Treaty, describing them as " impertinent."

The fundamental purpose of all this propaganda was to induce Congress to order a searching investigation into the naval position. In that case, wrote the Washington Correspondent of *The Times*, " a host of men who ask no better than to air their suspicions and their curious theories would have got the publicity

they desire and the public would have been needlessly alarmed. What the effect would have been upon international relations or upon the principle underlying the Washington Treaty—which is that limitation of armaments can be secured by negotiation—these men neither knew nor cared." But President Coolidge refused to give way. He very shrewdly pointed out that the investigation demanded was, in effect, conducted by Congress every year as a necessary preliminary to the passage of the naval budget. Further, he declined to admit the principle that America was bound by the terms of the Treaty to compete with other Powers in a new race for naval primacy, if, indeed, such a race existed.

It is now known, however, that the Lower House of Congress went into the naval position very thoroughly during the winter of 1924–25 on its own account, for the report of the sub-committee entrusted with this task was afterwards published as a volume of 1000 pages. Apparently its findings were at variance with those of the alarmists, for neither then nor afterwards did Congress give effect to their recommendations. Perhaps the most important passage in the document was that in which Mr. Wilbur, the Secretary of the Navy, voiced his opinion of the Washington Treaty. "I have" (he said) "absolutely no sympathy with the claim that we were out-generalled in the Limitation of Armaments Treaty. The fact is that we got exactly what we proposed, and I am perfectly willing to accept the judgment of those who participated in that Treaty, that the battleship strength, at the conclusion of the Treaty and of the scrapping, was substantially in the ratio stated in the Treaty." In spite of this positive verdict by the highest official of the American Navy, the tendencious propaganda continues. That it will ever result in the denunciation of the naval compact is improbable, but it is not without an adverse effect on Anglo-American relations.

While all parties have scrupulously obeyed the letter

of the Treaty, observance of the spirit in which it was conceived and which it was intended to foster has been less punctilious. The United States is far from being the only sinner in this respect. The first discordant note was struck by Japan. A few months after the Treaty had been signed she introduced a large programme of new construction on the plea of having to balance her loss of battleship power by an increase in cruiser, submarine, and other light tonnage. She must have known, however, that her action would inevitably revive the competitive building of vessels not subject to restriction, as has proved to be the case. Thus, in condemning Great Britain for having flouted the spirit of the Treaty by constructing a new base at Singapore, she lays herself open to the same charge.

Britain's own record is by no means free from reproach. Apart from the Singapore plan, which is difficult to reconcile with the aims of the Washington Conference, we have recently been advertising our intention to maintain the lead in cruiser strength, in spite of having previously accepted, in principle at all events, a one-Power standard for every class of tonnage. This change of front has, of course, been seized upon by foreign propagandists as evidence of double-dealing. Again, we have played into their hands by adopting since the Washington Conference a policy of extreme secrecy in naval affairs for which there is no apparent justification. An impenetrable screen has been drawn round the Navy and its operations, as though our defences were being spied upon by a host of enemy agents. Particulars of new ships are guarded more jealously than in pre-war days, when there were good reasons for being reticent about such matters. Four years after the battleships Nelson and Rodney had been laid down official details of their design were still withheld " in the public interest," and the same elaborate mystery is maintained with regard to other vessels.

What renders this " hush hush " policy the more

conspicuous is that it is practised nowhere save in Great Britain. In the United States, in France, and even in Japan, the naval authorities are far more communicative. Essential details of new ships are disclosed well in advance and other naval events freely chronicled. The British Admiralty, on the other hand, appears unable to divest itself of the habit of secrecy which it acquired during the war.

From the bureaucratic point of view secrecy has the great merit of conferring immunity from criticism, for when practically nothing is known about the activities of a department it is safe from inquisition. There are, however, certain drawbacks, one being the tendency of the public to become indifferent to national institutions which are kept in the background. Hitherto the chief asset of the British Navy has been the warm interest displayed in its welfare by the British people. Time and again has public opinion resisted political attempts to undermine the strength and efficiency of the naval service. But if in future it is to be kept out of sight, it will soon be out of mind, and the consequences of public indifference will sooner or later be reflected in steadily dwindling Estimates. In the meantime this excessive and ill-timed secrecy is doing us visible harm abroad, where it is justly regarded as inconsistent with the pledge we have given to observe the Naval Treaty in spirit no less than in letter.

CHAPTER X

THE AMERICAN NAVY AND ITS PROBLEMS

WHATEVER its deficiencies may be, the United States Navy is stronger to-day, both relatively and absolutely, than it has ever been before. Taking capital ship tonnage as the standard, the position in 1914 was that Great Britain stood first by a considerable margin, and Germany second, with the United States, Japan, and France closely in the running for third place. Of Dreadnoughts completed and being built Great Britain had 41, Germany 27, the United States 14, France 12, Japan 10, and Italy 10. Of ships approximating to the Dreadnought standard of power—that is, with a mixed armament of 12-in. and 10-in. or 9-in. guns—Great Britain had two, Japan two, and France six. Thus in actual tonnage and gun-power the French fleet probably came before the American, though the latter might have claimed precedence on account of its numerous and powerful ships of the pre-Dreadnought type.

At the close of the war in 1918 the situation had so far changed that the United States was second only to Great Britain, but the latter was still more than twice as strong in capital ships, and in cruiser tonnage the British superiority was so pronounced that no basis for comparison existed. At the present time the two fleets are on a footing of equality in capital ships and will remain so for many years to come. Consequently, the relative status of the American fleet has been very substantially improved in the past decade. In view of this fact, which admits of no dispute, it may seem strange to foreign observers that dissatisfaction

with the naval outlook should be so rife in the United States. To arrive at an understanding of the position it is necessary first to examine the naval resources of that country and then to consider the problems of strategy with which it is confronted.

The backbone of the fleet is constituted by 18 battleships, the majority of which are remarkable for their powerful armament and excellent protection. The two weakest vessels are the Florida and Utah, completed in 1911. In these the main battery is limited to ten 12-in. guns of the 45-calibre model. Both ships have been modernised and are now equipped with oil-burning boilers and bulge protection, which add considerably to their fighting value. The designed speed of $20\frac{3}{4}$ knots may have been slightly reduced by the bulges, but the change over from coal to oil has increased the radius of action. These two ships, though far below the post-Jutland standard, would nevertheless be capable of good service in the line of battle. Their defence above and below water is superior to that of certain vessels in other navies. The original displacement of 21,825 tons has been increased by the addition of bulges, extra armour-plating, and other fittings.

The Arkansas and Wyoming, of 26,000 tons, completed in 1912, are more powerful in every way. In these ships the beam was enlarged to 93 ft., thus permitting more extensive sub-division of the hull; armour protection was slightly improved, and a main battery of twelve 12-in. 50-calibre guns provided. In range and precision these guns are not inferior to the 14-in. 45-calibre weapon, and with efficient projectiles they should be effective against any modern battleship at average fighting range. The two ships were thoroughly renovated during 1925–26 in accordance with the following programme: (1) Installation of a new fire-control system. (2) Oil-burning boilers substituted for the coal-burners originally fitted. (3) Additional armour worked over

magazine and machinery spaces to reproduce the double-deck protection of later ships. (4) Bulge protection fitted. Thanks to these improvements the ships are now in a very efficient condition. The New York and Texas, completed in 1914, have been modernised on similar lines. They were the first American battleships to carry 14-in. guns, ten of which are mounted in each vessel. Their armour and underwater defence, now reinforced by bulges, is equal to that of all but the latest ships. Since being reconstructed each vessel displaces at full load nearly 30,000 tons.

In the Oklahoma and Nevada, which came into service in 1916, the same armament is carried, but the ten guns are disposed in two triple and two double turrets. Thicker armour is also fitted on the water-line, the gun positions, and at other sensitive points, which are proof against shell fire except at low range. The normal displacement of these ships is 27,500 tons. No plans have yet been prepared for modernising them, though the Navy Department is anxious to increase the elevation of the guns. The Pennsylvania and Arizona, also completed in 1916, displace 31,400 tons and carry twelve 14-in. guns in triple turrets. They are armoured on the same principle as the "Nevada" class. The New Mexico, Idaho, and Mississippi, completed in 1917–18, are heavier than the Pennsylvania by 600 tons, but otherwise resemble her very closely. In these ships, however, the 14-in. weapons are of a more powerful type, with a length of 50 calibres, and the guns in each triple turret can be elevated independently, instead of being mounted in a single sleeve, as in the Pennsylvania. The New Mexico was the first capital ship to be fitted with electric drive, a system of propulsion that was adopted for all later capital ships of the American Navy. The California and Tennessee, commissioned in 1920–21, are replicas of the preceding class, from which they

differ only in rig and in the increased elevation of their guns—30 degrees as against 15.

Finally there are the Colorado, Maryland, and West Virginia, which were built after the war to embody the teachings of Jutland and other actions. They are magnificent ships, equal in all-round fighting efficiency to any vessel afloat. They have practically the same dimensions as the California, but the main armament consists of eight 16-in. 45-calibre guns in double turrets. Their extraordinary powers of resistance were revealed by the experiments with the Washington —a unit of the class—in 1924. This vessel, which had to be destroyed under Treaty rules, withstood a heavy shelling from 14-in. guns, a bombardment by aircraft, and the explosion of torpedo charges below the waterline. At the conclusion of this ordeal the officers who boarded the ship found her still seaworthy.

The 18 battleships here described all burn oil, and their radius of action is large. The " Wyoming " class, for example, is credited with a steaming endurance of 4600 nautical miles at a speed of 19 knots, and of 8000 miles at 10 knots. The " Oklahoma " class can traverse 4000 miles at full speed (20·5 knots) and 10,000 miles at 10 knots. In gun-power, protection, and all other material elements of fighting efficiency excepting speed the American battle fleet is fully equal to the British, while its actual margin of superiority over the Japanese fleet is in excess of the five to three ratio prescribed by Treaty. In the important factor of speed, however, it stands at a marked disadvantage, its fastest ships being limited to 21 knots. Every man-of-war is necessarily a compromise. High speed entails some sacrifice of armament, protection, or cruising radius, and until recent years American naval opinion was averse from increasing battleship speed at the expense of any one of these qualities. In Great Britain and Japan, where the strategic and tactical value of speed was rated

more highly, the necessary sacrifice was accepted in certain ships.

The result will be seen on comparing the Queen Elizabeth with the Oklahoma, coeval ships of the same displacement, viz. 27,500 tons. The former mounts eight 15-in. 42-calibre guns. She has a narrow water-line belt of 13-in. armour and 11-in. plating on the turrets, but the armour protection elsewhere is rather light, and the beam of 90½ ft. is not sufficient to allow full advantage to be taken of sub-division as a defence against underwater attack. The speed is 25 knots. The Oklahoma carries ten 14-in. 45-calibre guns. Her water-line is defended by a broad belt of 13½in. armour extending over the greater length of the hull, the guns are behind 18-in. armour, and at other vital points there is stout plating to keep out enemy shot. The beam exceeds that of the Queen Elizabeth by five feet, thus enabling a more complete system of under-water defence to be employed. The speed is 20½ knots. In offensive power the two ships are about equal, but it seems certain that the Oklahoma could endure much heavier punishment than the British vessel.

Of late years the American Navy has attached more importance to high speed, and the lack of this attribute in its battleships is now held to be a serious defect. The six great ships of the "Indiana" class which were under construction before the Treaty were designed for 23 knots, while in the six battle-cruisers also being built at that time very light armour protection was accepted in order to gain a speed of 33 knots. All these vessels, however, were cancelled by the Treaty. When the time comes to lay down new capital ships for the American Navy the factor of high speed is likely to receive special attention, and some sacrifice of armament and protection may be made to secure greater mobility.

The shortage of cruisers is a constant source of anxiety to American naval officers. At present only

ten modern vessels of this type are available, and no further ships will be ready before 1928 or 1929. The Omaha and her nine consorts are of uniform design, the last of the group having been completed in 1925. Nominally of 7500 tons, their actual displacement is 9000 tons or more. For the time being they are the swiftest cruisers in the world, all having exceeded the contract speed of 33¾ knots. The armament is a powerful one, comprising twelve 6-in. 53-calibre guns, six of which can be trained ahead or astern and eight on the broadside. Protection is confined to a short belt of thin armour amidships. The ships are somewhat lightly built, and the grouping of the guns is open to objection on the ground that four pieces might be disabled by a single shell bursting in the forward or after battery. Nevertheless, they compare favourably with other cruisers of the pre-Treaty class, and their seaworthiness and steaming efficiency have been demonstrated by prolonged ocean voyages. To indicate the progress of naval artillery it may be mentioned that the 6-in. guns of this class have an extreme range of 17,000 yards.

Eight new cruisers were authorised by Congress in 1924, but up to the present money has been appropriated for five only, and the first unit was not begun till October, 1926.* It is therefore improbable that the last ship will be ready for service before 1931. The Pensacola, the nameship of the class, is 585 ft. in length and 66 ft. in breadth. With fuel and other supplies on board the displacement, nominally 10,000, will approach 12,000 tons, which may, indeed, be taken as the average for all cruisers built in conformity with Washington Treaty regulations. As the margin of weight that could be spared for armour

* A bill submitted to Congress in December, 1926, provides for the construction of ten further cruisers in place of the three remaining over from the 1924 programme. If this measure becomes law, the number of Treaty cruisers will be increased to fifteen.

was in any case very small, it was considered better to invest it in gun-power and speed. Thus the ship is practically destitute of protective plating, but on the other hand she mounts the exceptionally formidable battery of ten 8-in. 55-calibre guns, plus four 5-in. anti-aircraft pieces, and her speed is 33 knots. She is therefore at once the most heavily armed and the most vulnerable vessel of this type which has been designed up to now, though in respect of exposure to all forms of attack there is little to choose between cruisers of the Treaty class.

On this subject Sir George Thurston, the eminent naval architect, has written: "Protection, either horizontally or vertically, could under no conceivable conditions render the vessel (a Treaty cruiser) safe under the artillery attack of a battleship or a similar cruiser, or, for that matter, even from the guns of a destroyer if by chance the vessels met unexpectedly within short range. Therefore, protection is the feature which one can best afford to neglect in the design. Speed, coupled with heavy armament, being all-essential, the vessel should have the maximum speed compatible with a reasonable number of largest calibre guns, even if the protection of the vessel and guns is reduced to a minimum. The interior of such a cruiser is so fully occupied by boilers, machinery, and magazines that it is not humanly possible to provide by bulkheads, watertight compartments, or other methods of underwater protection, immunity from torpedo or mine attack. Therefore, while in the interest of ordinary safety it is advisable to keep the vitals as far away as possible from the sides and to sub-divide to the fullest possible extent, it must be recognised that the explosion of a large mine or of a torpedo with a powerful war-head would, in the majority of cases, utterly wreck and destroy the vessel." * It would therefore seem that American designers, in giving their new cruisers the utmost

* *Brassey's Annual*, 1925.

measure of artillery power and speed at the expense of such scanty armour protection as would have been possible, have taken the logical course. It is true, however, that these ships, in common with all other cruisers of the Treaty class, are fragile to a degree, and well merit the appellation of "tin-clads" which has been bestowed on them by naval critics.

Assuming that the Pensacola and her sister-ship, Salt Lake City, are ready for service by 1929, the United States will then possess twelve modern cruisers, two being of 10,000 and ten of 7500 tons. At the same date the British Empire will have twenty ships of corresponding types, viz. seventeen of 9750 to 10,000 tons and three of 7600 to 8000 tons. Japan will be in possession of four ships of 10,000 tons (or eight if the 1927 building programme is expedited), and four of 7100 tons. Of effective smaller cruisers suitable for duties which do not call for great seaworthiness or steaming endurance the British Empire will have about twenty, Japan seventeen, and the United States none. It should be added, however, that the majority of the smaller Japanese cruisers are excellent sea-boats, with a wide radius of action. In cruiser tonnage, therefore, the American Navy is, and seems fated to remain, greatly inferior to the other two, and so long as this deficiency continues it will labour under a severe handicap.

Apart from the grave embarrassment it would prove to be in war, the shortage of cruisers must interfere very seriously with the tactical training of the fleet in peace time. In this connection a pertinent extract from the Commander-in-Chief's report on the manœuvres of 1924 may be quoted: "None of the light cruisers took part in Problem IV. They were much needed as scouts, as supports for the screen, and as linking vessels. It is hoped that more cruisers will be built soon, to be of 10,000 tons, mounting 8-in. guns. An expedition like that undertaken in Problem IV. would require many more modern cruisers than are

now available in order to make it a possible or a useful undertaking." Owing to the dearth of cruisers, many of their duties have to be performed by destroyers, which are of course unfitted for such work. This expedient may serve in peace, but it would certainly not be possible under war conditions.

Since there is not the least doubt that the American Navy stands urgently in need of additional cruisers, no exception can be taken to propaganda which is directed to this end. Protest is only justified when, as too often occurs, the exasperation of American naval men at the close-fisted policy of Congress is vented on the heads of foreign Powers which happen to be providing for their naval requirements on a more liberal scale. It is a common complaint that the United States is being outdistanced in cruiser construction because these vessels, owing to foreign opposition, were exempted from limitation under the Treaty. This argument breaks down in view of the fact that the United States is also well below the five-five ratio in aircraft-carriers, a class of vessel which the Treaty does restrict. If American sea power is in danger of eclipse, the blame surely rests with the controllers of the national purse.

The completion of the Lexington and Saratoga will give the American Navy the two largest and swiftest aircraft-carriers in existence. It has hitherto possessed only one vessel of this type, the Langley, a converted fleet collier, whose very low speed renders her suitable only for training purposes.

The Lexington and her sister were designed originally as battle-cruisers of 43,000 tons. As aircraft-carriers their displacement is restricted to 33,000 tons, and since the original machinery is retained this reduction in weight has enabled a higher speed to be achieved. Steaming at full power they can reach 34½ knots. Great speed is an absolute necessity for aircraft-carriers co-operating with a fleet, as the following summary of their duties will show :

"The operations of flying off and flying on (*i.e.* the launching of aeroplanes from the ship and their return to her deck after flight) must be considered separately. In flying off, the time during which the carrier is required to steam into the wind is small. The aircraft to be launched can all be ranged on the flying deck or decks previous to turning head to wind, and as soon as the ship is ready the machines are flown off in rapid succession. Let it be assumed that the wind is from right astern of the fleet. It will take the carrier some five minutes to turn 180 degrees. It is then necessary for her to steam at 20 knots for, say, three minutes head to wind while flying off a flight of machines. She then turns again to regain station. In all, thirteen minutes have elapsed, during which time the fleet (at 20 knots) has proceeded 4·3 miles, and the carrier has steamed one mile on the opposite course. To regain station the carrier has to make good 5·3 miles. Assuming she is able to develop a relative speed of 10 knots, this will take thirty-two minutes." * Landing operations naturally consume far more time; under ordinary conditions, it takes six times as long for the carrier to recover her machines as to launch them on their flight. Therefore, if her speed is only equal to that of the battleships which she is accompanying, she cannot possibly keep in touch with them and co-operation becomes impossible. Carriers designed for fleet service should be at least ten knots faster than the battleships.

As the Lexington and Saratoga have a clear margin of thirteen knots over the swiftest American battleships, they should be able to perform their duties with great efficiency. Each has a capacity of 72 aeroplanes and mounts the powerful armament of eight 8-in. guns and twelve 5-in. anti-aircraft pieces. The only fault to be found with these ships is their enormous size and exorbitant cost—£9,000,000 each. The

* *Journal of the Royal United Service Institute*, August, 1926.

sinking or disabling of even one such vessel would be a grave disaster, and the task of protecting its large and vulnerable carriers might prove a serious hindrance to the fleet. In adapting aviation to naval requirements the United States has followed the sound policy of equipping practically all types of vessels with their own aircraft. Every battleship and cruiser has from two to three machines on board, with catapults for launching them. Miniature seaplanes are carried even by certain of the destroyers and submarines. Consequently, the loss of its regular carriers would not deprive the fleet of more than a portion of its air strength. In the scope and efficiency of its air service the American Navy claims to be pre-eminent.

Thanks to the heavy programme of construction undertaken during the war, an extremely large and powerful force of destroyers is now available. The total number is 295, including 20 which have been transferred to the Coast Guard. The great majority of these boats were completed in 1919–20, and are thus comparatively modern. Although many were hastily built, the general standard of efficiency is high, and in tonnage, speed, and armament they compare favourably with foreign destroyers. Owing to shortage of personnel and lack of funds for maintenance about half the boats are laid up in dockyard, where careful measures are taken to preserve their structures, machinery, and equipment in good condition. Opinions differ as to the time it would take to place the whole of this destroyer reserve on a war footing, but if crews were available they could probably be made ready for active service within ten weeks.

At the beginning of 1927 the submarine flotilla consisted of 129 boats, not including five under construction or projected. Only sixty of these, however, are sufficiently large and seaworthy to be employed on ocean-going duty, the remainder being small boats of 520 tons or less whose sphere of utility is limited to coast defence. Of the larger boats fifty

belong to the "S" class, with an average displacement of 900 tons, a surface speed of 14½ knots, and a cruising endurance of 5000 to 8000 miles. Three "fleet submarines," T1–T3, of 1100 tons and 20 knots, were completed in 1924 but proved unsatisfactory and have had to be fitted with new engines. The latest vessels are submarine cruisers of the "V" class, designed for duty with the Fleet. In the first three the displacement is 2164 tons and the speed 21 knots, but the boats now under construction will approach 3000 tons. They are powerfully armed with guns and torpedoes. One is equipped as a mine-layer, with a capacity of 60 mines.

In the Fleet Commander-in-Chief's report already quoted the following judgment was passed on the submarines engaged in the manœuvres: "Of the combatant ships taking part in the problems the submarines are the worst. Their design is obsolete and faulty. Their ventilation is poor, and at times almost non-existent. The temperature in the engine-room rose as high as 135 degrees. They are unreliable, some of their fuel tanks leak, either spoiling their fresh water, or enhancing the fire menace, or leaving an oil 'slick' whereby they can be tracked. The radius of the Holland boats is much less than rated and they drag excessively when loaded. All the submarines are so deficient in speed as to be of small use for fleet work except by accident of position. They must be used with the fleet, either so far ahead as to be out of the way, in which case they are a source of worry, or assembled astern, from which location they cannot gain an effective position in case of contact." There is no doubt that all save the newest American submarines are lacking in speed, contemporary British and Japanese boats being much faster. Further, their radii of action seem to be unduly restricted, a drawback the more serious in view of the strategic conditions under which they would have to operate in war. Next to cruisers,

large submarines of good speed and great endurance would appear to be the most pressing requirement.

Since oversea expeditions enter very largely into American naval calculations, the question of fleet auxiliaries assumes great importance. Of such vessels —depôt ships, repair ships, tankers, ammunition and supply ships, generically termed the "train"—there is a fairly large establishment. Their performance in recent manœuvres was thus criticised in an official report: "The common deficiency of these (auxiliaries) is speed. Our train in convoy would limit the fleet speed to about 7½ knots. In Problem II. the battle fleet dropped its convoy because the main body had to make good 9 knots (*i.e.* make about 11 to allow for fuelling at sea). With a train of seventy ships this would be a serious matter. In Problem IV. part of the small convoy starting was lost." And, it was added rather mordantly, "the absence of most of the auxiliary ships of the paper organisation prevented a further demonstration of their general inability to keep touch."

In round numbers the American Navy has a personnel of 104,000 officers and men. As, however, this total includes marines, of whom only about twelve per cent. are employed on shipboard, American critics contend that it gives an exaggerated impression of the Navy's man-power. Further, they point out, a considerable percentage of naval ranks and ratings is engaged almost exclusively in aviation duty (the air service being an integral part of the naval organisation), whereas in the British Navy this duty is performed by members of the Royal Air Force. This is not strictly correct, for it will be found on referring to the Navy List that the number of naval air pilots now borne in H.M. ships exceeds the total of R.A.F. pilots. It is true, however, that a fair numerical comparison between British and American naval personnel is not easy to arrive at, owing to the different methods of administration. To provide full

complements for all ships and services of the American Navy an establishment of 12,000 officers and 150,000 men would be required. The estimated total for war is 30,000 officers and 500,000 men.

As regards the quality of the personnel, the American naval officer stands, by general consent, in the front rank of his profession. He is, perhaps, more studious, more absorbed in the technical and scientific problems of his service than his British *confrère*. As for the men, it is a common complaint in the American Navy that the present system of enlistment and training falls short of what is necessary to secure the requisite degree of war readiness. Matters have been somewhat improved by raising the minimum term of enlistment from two years to four, but even this is too short a period in which to turn out a thoroughly efficient bluejacket. As it is very exceptional for time-expired men to re-enlist, the lower-deck personnel consists in the main of youthful ratings who have barely emerged from the elementary stage of training. To remedy this state of affairs it has been more than once proposed to raise the first period of enlistment to six years.

In advocating this policy an American naval officer writes: "Only then would it be possible for the Navy to reap the benefit of the early years in which the recruit is receiving and not giving. Other Powers have six and eight-year service periods. Is it not somewhat fatuous to believe that we can do as much with our recruits in five years?" The problem of making good the deficit in man-power in an emergency is complicated by the meagre strength of the reserve forces. Last year only 4290 officers and 17,500 men were on the register of the U.S. naval reserve.

Having reviewed the existing elements of America's sea-power we may turn to her major problems of maritime strategy. These, it can be affirmed without hesitation, are infinitely less complex than those which preoccupy Great Britain. In legislating for her naval

defence America starts with two inestimable advantages: first, she is separated from the mainland of any potential enemy by 3000 miles of water on the one side and 4500 miles on the other; secondly, she could, if need be, dispense with seaborne supplies and both feed her population and keep her essential industries going from her own domestic resources. Security of individual life and property being the cardinal motive of every system of national defence, a fleet just strong enough to defeat such hostile forces as might be able to penetrate as far as her coastline would, in theory, suffice for American requirements. In practice, of course, a coast-defence navy would be altogether inadequate.

As a State whose prosperity is not wholly independent of oversea trade, and with outlying possessions which could not be abandoned under duress without an intolerable forfeiture of prestige, America unquestionably needs a powerful oceanic navy. If she failed to maintain such a navy, her declension to secondary rank among the Powers—with all the political and economic penalties that such a decline would involve—would be swift and sure. Nevertheless, it must be repeated that her naval problems are, in essence, comparatively simple. In a strictly practical order of precedence they are: (1) defence of the coastline on the Atlantic and the Pacific and the protection of coastwise shipping; (2) defence of the Panama Canal and its approaches; (3) protection of shipping engaged in oversea trade; (4) defence of outlying territories, *e.g.* the Philippines and Samoa. Problem (1) was already solved in part by the factor of geography, and the conjunction of this factor with the naval, coast artillery, and air forces now in existence renders the solution complete.

Problem (2) deserves rather more consideration. The vitally important part which the Isthmian Canal plays in American naval strategy is manifest. Before this waterway was constructed the main body of the

fleet was normally stationed in the Atlantic. To reach the Pacific coast it had to steam round the Horn, the voyage from New York to San Francisco being one of 13,350 miles. Some years ago, when relations with Japan were strained, alarm was caused on the West coast by the revelation that a Japanese naval force could cross the Pacific, lay waste the coastal cities of California, Oregon, and Washington, and return to Japan before the American fleet had time to arrive from the Atlantic. Local political interests were responsible in some measure for the retention of the fleet in Atlantic waters, though the lack of adequate bases on the Pacific coast was probably the determining factor.

With the completion of the Panama Canal the position was vastly improved. By this route the distance from New York to San Francisco was reduced to 5290 miles, a saving of more than 8000 miles. Henceforth the fleet was divided into two sections, one of which was stationed in the Atlantic, the other in the Pacific. In an emergency both sections could unite at a week's notice. For administrative purposes they are treated as one command, designated the " United States Fleet." At regular intervals they come together and are exercised as a unit. All the most powerful ships are in the Pacific, the Atlantic force comprising a few of the older battleships.

Having regard to the strategic importance of the Canal, its integrity in war is necessarily a matter of grave import. In addition to fortifications at each end there is a system of mobile defence by minelayers, submarines, and aircraft. A strong military garrison is stationed in the Canal zone, over which, of course, the United States exercises complete political control. In recent years the adequacy of the existing defences has been questioned by naval and military officers. Nothing, they contend, should be left undone to secure the absolute security of the Canal, since its disable-

ment in time of war might have ruinous consequences. A few years ago naval manœuvres were held in Panama Bay to test the strength of the defences, and the result was held to confirm the doubts which had been expressed on this point. The Canal itself was shown to be susceptible, both to air attack by machines using a base on the Costa Rican coast and to direct bombardment by ships mounting long-range guns. The defensive batteries were found to be out-ranged by modern naval artillery.

According to the official report on the manœuvres, there was a certain point in Panama Bay whence the attacking fleet, having secured command of the air, could have opened fire with impunity on the Miraflores locks and the batteries guarding the Balboa (Pacific) end of the waterway. "This weak point is within range of twenty-four of the 14-in. guns now in the Pacific battle fleet, and from that point Admiral Eberle's fleet was able to bring eighty-two other 14-in. guns to bear on the fortifications now existing at the western end of the Canal while two battleships were attacking the locks. As the present effective range of the guns guarding the western entrance is about 20,000 yards, a fleet stationed under a smoke screen at this weak point would lie beyond the range of the coastal fortifications." To eliminate the menace of naval bombardment it was proposed to mount new guns of the heaviest calibre on Toboga Island, which lies in Panama Bay nine miles beyond the original seaward defences, and at other positions. Whether these guns have since been mounted is not known.

It is worth noting that the manœuvres rested on the assumption that an attacking fleet would commence operations by seizing a base in neutral territory adjacent to the Canal. The hostile (Black) fleet actually proceeded to Culebra Bay, in Costa Rica, and prepared to establish an aircraft base there. By sea the distance from Culebra to the Pacific

terminus of the Canal is 550 miles, but aircraft flying across Costa Rican territory to the Gatun Dam would have to cover only 350 miles. This dam is regarded as being the most sensitive point of the Canal, for if it were breached the Gatun Lake would empty itself into the Atlantic, thus rendering the use of the Canal impossible. On the other hand it is exceedingly doubtful whether aircraft bombs, even those of the heaviest type, would be powerful enough to inflict such injury on the massive structure.

Fundamentally, of course, the defence of the Canal is a naval problem. So long as the present standard of relative strength is maintained the Canal is absolutely safe from serious attack, and the American strategists who planned the recent manœuvres would, no doubt, be the first to admit the artificiality of the premises upon which the problem was based. Here again the cold facts of geography and logistics stand in opposition to alarmist statements. There are people in America who profess to regard the West Indian possessions of Great Britain as a menace to the United States in general and to the Panama Canal in particular, and who are continually urging their transfer to American ownership. In 1923 a resolution to this effect was introduced by Senator Reed, of Missouri, who said *inter alia*: "The reasons for the resolution are manifold. These islands lie within the zone of our national influence. They lie distinctly athwart the path of our manifest national destiny. Their possession by foreign Powers is repugnant to the spirit of the Monroe Doctrine." The resolution found little support in the Senate, but from the Press discussion to which it gave rise there emerged the interesting fact that Britain's occupation of Jamaica was regarded by Senator Reed and his friends as a threat to the Panama Canal. It may therefore serve a useful purpose to exhibit the facts.

Granting for the sake of the argument the fantastic assumption that Britain might some day seek to

attack the Canal, it follows that she would endeavour to make Jamaica the base of operations. Jamaica itself is only 540 miles from the Atlantic end of the Canal, so that a naval force operating from there would be within easy reach of its objective. But since no naval force can safely be despatched to a distant base in time of war unless its communications are secured, the essential factor in the problem is not the distance from Jamaica to the Canal but the distance of Jamaica from England on the one hand and from the United States on the other. From Plymouth to Port Royal (Jamaica) is a voyage of 4000 miles. From Key West (U.S.A.) to Port Royal is a run of only 850 miles, while from the American naval base at Guantanamo (Cuba) the island can be reached in a day. Clearly, therefore, a position so remote from England and so close to American territory could not be held in the event of war, much less used as a base from which to assault the Panama Canal. Britain might conceivably hold it if her fleet were from two to three times as powerful as the American fleet, but even then the problem would be a difficult one, seeing that the approach to Jamaica is flanked by Porto Rico.

The position of Jamaica in an Anglo-American war would be analogous to that of the Philippines in an American-Japanese war. Both would almost certainly be lost because of their remoteness from friendly naval bases and their proximity to those of the enemy. The possibility of a Japanese attempt on the Canal is ruled out by the enormous distance—8000 miles—that the attacking force would have to cover before reaching its objective. It is therefore quite plain that under no imaginable circumstances could either Britain or Japan strike an effective blow at the Canal, and as these are the only two Powers in whose naval strength the United States appears to be interested, Problem (2) may also be taken as solved.

The third problem, that of affording protection to

shipping engaged in oversea trade, is primarily one of cruiser strength. With the few modern cruisers now at its disposal the American Navy could do practically nothing to secure the safety of the trade routes in war. American merchant ships would either have to travel in convoy under the escort of old armoured cruisers or armed auxiliaries—both unsuitable types for this work—or be left to fend for themselves. In the absence of swift cruisers to hold hostile raiders in check, the American merchant marine would in all likelihood be swept from the sea. Serious financial loss and a certain amount of hardship would be the result, but the American people would still be assured of an ample supply of food and other necessities. Twenty additional cruisers at a cost of £50,000,000 or so would be a cheap form of insurance for America's large and increasing volume of seaborne trade.

Problem (4), viz. the defence of outlying territories, particularly the Philippines, Guam, and Samoa, opens up the whole question of Pacific strategy which the writer has dealt with at some length in previous works. Here it suffices to repeat that the American Navy would be powerless to prevent the conquest of the Philippines and Guam in the event of war with Japan. Once lost, they might possibly be recovered by an almost superhuman effort. This would involve an amphibious campaign exceeding in magnitude and difficulty anything of the kind that has previously been attempted. It would necessitate the building of an entirely new fleet of warships and auxiliary craft; the conveyance of an army and its impedimenta across the Pacific, the greater part of the route lying within the sphere of enemy naval action; the seizure of intermediate and terminal bases, which would probably be found in a state of defence; the holding of such bases against determined counter-attack; the guarding of communications thousands of miles in length; and, finally, the development of offensive operations in the advanced war zone on a scale

sufficient to force a decision. By no other form of military action could the lost islands be recovered.

It may be of interest to quote the views of a distinguished flag-officer of the British Navy on this problem as communicated to the writer: "If America ever has to fight Japan before she has secured proper fleet bases across the Pacific, the individual least to be envied in the whole world would be the American commander-in-Chief. He would have no means of forcing a decision, since the initiative would rest entirely with the enemy, yet he would command a fleet sufficiently powerful to justify a public clamour for something to be done with it. And if he yielded to this clamour and engaged in any active operation, the odds against it succeeding would be ninety-nine to one. Villeneuve on the eve of Trafalgar had an easy problem compared with this. If I were an American naval officer, nothing less than the insistent call of duty would persuade me to command the fleet in a war with Japan, not only on account of the appalling responsibility, but because it would be virtually impossible to make any active move which was not foredoomed to failure."

American naval strength could not be brought to bear with full effect at any point more than, say, 1000 miles to the west of Hawaii. But Hawaii itself, together with Alaska, probably Samoa as well, and certainly the whole of the western seaboard, may be regarded as secure from all save spasmodic or casual attack. Attempts are made from time to time to depict Hawaii as being in grave danger of a Japanese invasion; in fact, the great naval manœuvres of 1925 were apparently staged for the purpose of attracting public attention to this supposititious peril. A "Blue" fleet, approximating in numbers and composition to the Japanese battle fleet—which, indeed, it was admittedly designed to represent—was assumed to have crossed the Pacific with all its ten capital ships. Under cover of their guns an army of 30,000

men was to be thrown into Oahu, the American battle fleet meanwhile being absent in the Atlantic, and unable to pass through the Canal owing to the destruction of the locks. Both hypotheses were far-fetched; but ignoring the very improbable contingency of the main American fleet being away from the Pacific at a period of strained relations with Japan, let us glance at the physical obstacles to an invasion of Hawaii by that Power.

As Japan has but ten capital ships all told, none of which, if lost, could be replaced for several years, it is in the last degree incredible that she would risk this precious fleet by sending it 3400 miles across the Pacific to attack a well-defended fortress that lies only 2100 miles from the American seaboard. Hampered by a train of auxiliary ships and at least a score of troop transports the expeditionary force would have to proceed at low speed, the voyage taking from ten to twelve days. While approaching Hawaii this great concourse of ships, many of them slow and unhandy, would offer a tempting target to the American submarines and aircraft, which were assumed in the manœuvre programme to be present in considerable force. If the invaders reached their objective they would do so with depleted bunkers, which could not be replenished unless the reserves of coal and oil in Hawaii were captured intact.

Before any landing was attempted the battleships would have to put the defences out of action, and as a number of heavy guns and howitzers are mounted at Oahu the task would be no easy one. Judging from war experience at the Dardanelles and on the Flanders coast, the ten battleships would be unable to make any serious impression on the batteries ashore. Their fire, to be effective, must needs be delivered at close range, but this would necessitate exposing the ships to a return cannonade which might well prove destructive to them. Moreover, while the bombardment was proceeding the transports and auxiliary

vessels would be exposed to submarine and air attack. Assuming by a further effort of imagination that the defences were silenced, the landing force of 30,000 men would have to be put ashore on the northern side of Oahu, which is reported to lie outside the arc of fire of any battery now in position. Owing to the absence of piers the landing would have to take place in boats, and it would be almost impossible to land artillery, tanks, or other heavy material by this means. During the manœuvres a detachment of 1500 troops managed to get ashore under cover of night, but the disembarkation of 30,000 would be a very different matter. In the meantine the defences would not be idle. They would certainly bring up mobile artillery to shell the boats and landing beaches, and the invaders who survived would have to face a curtain of machine-gun fire. If in spite of all such difficulties they contrived to make good their foothold, they would still have to engage and defeat the full division of American troops which is stationed at Schofield barracks.

For the reasons here outlined a Japanese expedition against Hawaii is never likely to take place. Japan might well shrink from such an undertaking even if the American navy were weaker than her own; as it is considerably stronger, the enterprise would be not merely foolhardy but suicidal. Since there is nothing in Japanese war history to suggest that her strategists are unversed in the rudiments of their art, we may assume with confidence that no such preposterous idea as the invasion of Hawaii has ever entered their heads. Nevertheless, a party of Congressmen who witnessed the recent manœuvres were so impressed that they returned to Washington determined to convert Oahu into "the Gibraltar of the Pacific." That Pearl Harbour, the naval base at that island, is of supreme strategic importance to the United States is self-evident. It should accordingly be provided with all facilities requisite for the maintenance, repair, and replenishment of the great

battle fleet which would undoubtedly make this base its headquarters in time of war.

The foregoing brief survey of America's naval resources and problems scarcely bears out the contention that her sea power has suffered eclipse. It is true there are serious deficiencies, notably the dearth of cruisers and the lack of Western bases; but the former is remediable and the latter does not, in the evident judgment of American statesmen, constitute a grave national danger. Had they thought otherwise the Washington Treaty as it stands would not have been negotiated. For the defence of the United States itself, its nearer insular possessions, and the Panama Canal, the existing naval forces are indubitably adequate. A substantial increment in cruiser tonnage would enable protection to be extended to floating trade. In short, America is enviably free from embarrassing naval problems of a vital character, and were it not for the vulnerability of the Philippines she could survey the future without misgiving.

CHAPTER XI

JAPAN AND HER FLEET: SEA POWER IN THE FAR EAST

As a direct consequence of the Washington Treaty, Japan's naval policy has been profoundly modified. She had previously been building a fleet of sufficient strength not only to protect her coast and her communications with the mainland of Asia, but to conduct offensive warfare overseas. Such a fleet was deemed essential in view of the impending development of great American naval strongholds at Guam and Manila, which are distant from Japan only 1360 and 1740 miles respectively. Shortly before the Washington Conference it was learned in well-informed quarters at Tokyo that Japan, under certain conditions, would be satisfied with a fleet in the ratio of two to the American three. This calculation was based on the fact that America, being distant 4500 miles from Japan, would require a fleet of double strength in order successfully to challenge the Japanese Navy in its own waters. If, however, the American bases at Guam and Manila were modernised, the whole situation would be altered, for American sea power would then be brought to within striking distance of Japan's coastline. In that event the latter would require a fleet of superior strength to ensure her safety. We have seen how Japan raised the question of naval bases at the Conference and made her acceptance of the 5 : 5 : 3 ratio conditional on the abandonment of the projected works at Manila and Guam.

Having carried her point she proceeded to discharge her Treaty obligations with scrupulous exacti-

tude. Irrespective of older vessels, she scrapped six post-Jutland capital ships which were under construction and cancelled eight more which had not been laid down, these fourteen ships representing the bulk of the " eight-eight " programme. At the same time the naval stations of Port Arthur and Maizuru were closed and the personnel of the fleet reduced by 12,000 officers and men. It should be observed that the " eight-eight " programme was not confined to capital ships. In addition to the sixteen vessels of this type it embraced a large volume of lighter tonnage, viz. twenty-six cruisers, ninety-four destroyers, and ninety-three submarines, many of which had been completed or laid down before the Treaty was signed; but there remained a balance of nine cruisers, thirty-seven destroyers, and forty-six submarines not yet begun. As the battle fleet had been so heavily depleted, it was assumed that a corresponding reduction would forthwith be effected in the so-called " auxiliary " programme.

The Japanese Government, however, decided to proceed with the building of all save a fraction of this auxiliary fleet. True, the number of vessels was drastically curtailed, the cruisers being reduced from nine to eight, the destroyers from thirty-seven to twenty-four and the submarines from forty-six to twenty-two; but as all these craft were simultaneously re-designed to larger dimensions the net reduction in aggregate tonnage amounted only to 13,000 odd tons, equivalent to the displacement of two light cruisers. The reasons for this decision, as communicated to the writer by a competent authority in Tokyo, were the following:

" Since the Treaty did not affect small ships, Japan felt herself at liberty to carry out, in an abbreviated form, the original programme of light tonnage, the more so as all the other Powers continued to build these smaller warships, or had expressed their intention of doing so. What we now

propose, therefore, is to proceed with the building of such cruisers, torpedo craft, submarines, and gunboats as the Ministry of Marine considers to be absolutely essential to the defence of the Empire. But so far from having added to the original light programme, we have reduced it by more than 13,000 tons. Otherwise, it has only been modified to the extent of building certain units to increased dimensions—for example, some cruisers have been enlarged from 6000 tons to 7000 or 10,000, and submarines at first planned as medium boats have been re-designed on ocean-going principles. It is often assumed that these light craft are peculiarly adapted to offensive operations and are being built with that object. But there is no real ground for this idea. As regards cruisers, Japan has a large and thriving sea trade, which in case of war would need to be protected, and for this work the fast light cruiser is admirably suited. Other countries, particularly Great Britain and the United States, possess many similar ships, but no one accuses them of meditating a raid on the merchant shipping of another State.

"The destroyer is essentially a defensive type, especially in the hands of a Power like Japan, which is so remote from any possible enemy. These boats have a very limited steaming radius, which keeps them tied to their own coast or battle fleet, and they could not well be used for attacking commerce. This leaves only the submarine, regarding which Admiral G. A. Ballard, of the British Navy, has written: 'It is an open question whether the greater part of the money which Japan is spending on other ships would not be better invested in the form of submarines, for Japanese waters are particularly well suited to the operations of that type of vessel on account of their great depth, which precludes the possibility of submarines being mined in as they were in the North Sea. With a couple of hundred of these craft as a defence, no foreign battle squadron would ever be

likely to approach her coasts or attempt to enter the Yellow Sea.' These remarks confirm the accuracy of Admiral Baron Kato's judgment when he insisted at the Washington Conference that cruisers and submarines should be rated as defensive ships. Finally, it should be borne in mind that Japan is totally dependent on sea communications for her very life. Without an adequate navy she could be subdued with ease, either by blockade or direct attack. It was for this reason that she decided, after agreeing to scrap the best part of her battleship fleet, to build a moderate number of other types whose war value has been automatically increased by the disappearance of so many capital ships. Japan is building against no one, but simply and solely to cover her minimum requirements for defence; nor will her present programme be enlarged unless some drastic change takes place in the standard of relative strength now existing."

These arguments would have carried more weight had the signing of the Treaty been followed at once by a general resumption of shipbuilding in the unrestricted types. But that was not the case. Except in Japan and France naval construction remained virtually at a standstill for two years after the conclusion of the Treaty, as will be seen from the following table of ships laid down in 1922–23 :

	Cruisers.	Destroyers.	Submarines.
British Empire . .	1	0	0
United States . .	0	0	0
Japan	6	15	11
France . . .	8	18	11
Italy	0	4	0

The figures above make it clear that Japan forced the pace in naval expansion in the early post-Conference period, though France was close on her heels. To the motives already recorded, Japan added that of economic necessity. It was explained that her shipbuilding industry, already hard hit by the curtailment of the battleship programme—in anticipation

of which the shipyards, ordnance, armour-plate, and other heavy manufacturing plants had been enlarged—must have suffered ruin if the contracts for auxiliary vessels had also been annulled. This argument might have been advanced with even greater cogency by Britain, where naval shipbuilding had long been one of the key industries, and upon whom the economic effects of disarmament at sea reacted with peculiar severity.

What Japan seems not to have realised was that a new psychological atmosphere had been created by the Treaty. With the signing of that instrument the further production of naval material by any one nation became a matter of intimate concern to all, and the fact that capital ships were henceforth to be rigidly limited gave a new significance, political no less than military, to those other combatant vessels which were not subject to restriction. While it might be unjust to say that Japan, by embarking on a fairly large programme of auxiliary tonnage so soon after the Treaty, provoked a renewal of competitive building, her action undoubtedly hastened the resumption of naval construction by other Powers, and to that extent was antagonistic to the spirit of the Treaty.

On the other hand, the defensive character of her naval armaments cannot be questioned. As has been said, her main problem is to safeguard her communications in the China and Yellow Seas, which link her with China, Manchuria, and Korea, whence comes the bulk of her iron ore and coal and a considerable percentage of her rice and beans. These are the really essential sea routes, the vital arteries through which her life-blood flows. If they were severed she would perish. Deprived of foodstuffs and raw materials from the Asiatic Continent her people would starve and her whole economic system be smitten with paralysis. The long-distance routes, one leading across the Pacific and the other to India and Europe, are, of course, of great commercial importance in time of

peace. Japan's trade with the United States alone represents more than 40 per cent. of her total revenue from foreign commerce, while a steady volume of traffic is maintained with the Dutch East Indies, the South Sea Islands, Australasia, India, and Europe. In war, however, neither of these oceanic routes would be absolutely essential to her sustenance, and if both were closed she would still be able to carry on with the imports she received from China.* Primarily, therefore, the task of her navy is to maintain under

* Since the foregoing was written a most instructive paper by Commander Ichiro Sato, I.J.N., in *Brassey's Naval and Shipping Annual* for 1927, has thrown further light on Japan's dependence upon overseas supplies. The following table shows the percentage of her seaborne imports :

Rice	15	Nickel	100
Wheat	55	Lead	95
Beans	50	Zinc	80
Sugar	95	Steel	55
Fuel oil	75	Iron	45
Cotton	100	Fertilizers	60
Wool	100	Dyes, chemicals	75
Rubber	100	Machinery	55

Commander Sato writes : " The security of the East China Sea is not in itself enough. At present only one-half of our imported foodstuffs is drawn from Chosen (Korea) and the Chinese mainland. In time of war, with the granaries of Manchuria and the Yangtse Valley in secure communication, we might manage the supply of cereals, but there are many other articles of prime necessity which are not produced in these parts. The importance of these waters lies not only in that they contain the Japanese communications with the Asiatic mainland, but also in that over them passes her all-important trade from farther south. Even for some of the foodstuffs, sugar for instance, she must always rely on a source outside this area. But an item of the utmost importance coming from farther afield is fuel oil. One-half of the oil imports of Japan is drawn from the Dutch Indies, and the freedom of that sea-route will be absolutely necessary for her power of resistance. The control of the routes in the China Sea is of great value to Japan, too, for the supply of rubber, clothing materials, and metals. The protection of trade in these waters is, therefore, a charge against the Japanese Navy almost as essential as its first duty."

all circumstances absolute command of the seas that divide her from the neighbouring continent, a task which is facilitated by the geographical situation of the Japanese Empire itself.

Since the collapse of Russia no other Power has been in a position to menace Japan with naval attack, and her problem of defence is thus far simpler than it was in the days when powerful Russian squadrons were stationed at Port Arthur and Vladivostok, the former only 600 miles and the latter less than 450 miles from her coast. It has always been her policy to discourage the establishment of foreign naval bases in the Far East, and we have seen with what success she pursued this aim at the Washington Conference. The war had previously given her an opportunity to eject the Germans from their stronghold at Kiao-chau. Nothing is more certain than that Japan would fight to the death to prevent the creation by any other Power of a new naval base in Far Eastern waters. Notwithstanding its remoteness from her territories she views the projected fleet base at Singapore with dislike and suspicion, and these sentiments seem to grow stronger as the work proceeds. When she laid claim at Versailles to the German Pacific islands north of the Equator her action was ascribed to mere lust for territory. In reality, however, her motive was to prevent their acquisition by another Power, presumably the United States, who would thus have had a series of potential fleet bases in the Western Pacific.

From whatever angle Japanese naval policy is surveyed, the dominating influence of the base factor is always obvious. Equally manifest is the defensive character of that policy. Leaving aside the ex-German islands (Pelew, Mariana, Caroline and Marshall groups), the use of which for naval or military purposes is prohibited by the terms of the mandate, Japan is found to possess no naval stations outside her own waters, since Formosa may reasonably be

included in this zone. Moreover, the only occasion on which she has conducted naval operations at any great distance from her shores was during the great war, when, at the invitation of her Allies, she sent ships to join in the hunt for Von Spee and also to perform escort duty in the Indian Ocean and the Mediterranean. Her naval history was made in the Yellow Sea and the Sea of Japan, which, together with the line of the Pacific from Saghalien to Formosa, still constitute her maritime frontiers.

Another circumstance to be noted is that Japan is the only one of the great Sea Powers which maintains no naval force in distant waters. With the exception of a gunboat flotilla on the Yangtse, not a single ship is commissioned for foreign service. The only Japanese men-of-war ever seen abroad are the old armoured cruisers which serve as training ships. Japan's naval power is thus regional and highly concentrated. It is formidable in the Western Pacific but nowhere else. No doubt the large cruisers and the ocean-going submarines now being built would be capable of offensive operations in areas remote from Japan, but only in the capacity of raiders. Under existing conditions the Japanese Navy as a whole is virtually tied to its own corner of the Pacific.

The battle fleet comprises ten capital ships. Two of these, Nagato and Mutsu, are of post-Jutland design, though having been laid down in 1917–18 it is doubtful whether they embody all the technical lessons of that engagement. The displacement is 33,800 tons, and the speed, though unofficially returned as 23 knots, may be as much as 25 knots. Armour and underwater protection is very complete, this feature having been determined by exhaustive experiments before the design was finally approved. It has been stated in the Japanese Press that the experiments in question cost £150,000. In the original plans, which were drafted in 1916, an armament of twelve 14-in. 50-calibre guns was provided for, but when it

became known that the new American battleships were to mount 16-in. guns, eight weapons of this bore were substituted, the guns and their mountings being entirely of domestic manufacture. A feature of the "Nagato" class, and indeed of all Japanese capital ships, is the powerful secondary armament, namely, twenty 5·5-in. guns. In view of their higher speed these two ships are perhaps slightly superior in fighting value to the American "Maryland" type, which carries the same armament, though the American vessels have better protection. The four remaining battleships—Ise, Hiuga, Fuso, Yamashiro—are much alike, the displacement being about 31,000 tons, the speed from 22 to 23 knots, and the main armament twelve 14-in. 45-calibre guns. They were completed in the years 1915 to 1918. It is proposed to modernise them by working in additional deck armour and anti-torpedo bulges.

The only other capital units are four battle-cruisers —Kongo, Hiyei, Haruna, Kirishima. The first-named was built in England and completed in 1913; the other three were constructed in Japan to the same design, a certain percentage of the material being obtained from abroad. The displacement is 27,500 tons, the speed 27½ knots, and the heavy armament eight 14-in. guns. At the date of their completion they were the most powerful battle-cruisers afloat, but they are so deficient in armour protection that the present fighting value of the squadron is problematical. Capital ships which cannot stand up to the fire of heavy guns—as these certainly could not—are of doubtful utility, experience having shown that neither great speed nor powerful armament compensates for indifferent protection.

It should be observed that all the ten Japanese capital units are coal-burners, though a quantity of oil is carried as auxiliary fuel. In designing their ships on a coal-burning basis the authorities had in mind the limited stocks of oil-fuel upon which they could

count in an emergency. The problem of oil reserves in wartime is a serious one for Japan, who is almost entirely dependent on external sources of supply. Efforts are being made to develop the oil-fields of Saghalien, particularly in the Russian part of that territory, a clause in the Russo-Japanese agreement of February, 1925, empowering Japan to continue this work. So far, however, the amount of oil so derived is not nearly sufficient to cover even the normal requirements of the Navy, and a Tokyo paper stated recently that all future warships, even the destroyers, are likely to be equipped with coal-fired boilers. In view of the disappointing yield of the Saghalien wells and the very limited output of the domestic fields in Niigata and Akita, Japan is compelled to purchase oil for her Navy in California, Mexico, Java, and Borneo. As no reliance could be placed on these sources in war, it would obviously be imprudent to add many more oil-burning vessels to the fleet.

It is just possible that the problem may eventually be solved by the artificial distillation of oil from coal. Writing in June, 1924, the correspondent of *The Times* in Tokyo reported that preparations were then on foot to equip an expedition which would carry out a thorough examination of the coal seams in Manchuria adjacent to the Manchurian Railway. "If the prospect of bulk production appears to be reasonably bright, operations will be begun, distillation plant will be set up, and Japan will have begun to tap an assured supply close at hand and under her own control. She thus will have improved at a single stroke the efficiency of her Navy and of her mercantile marine." The results attending this experiment are not known, but as large sums are still being spent on the development of the Saghalien fields it would appear that the expected supplies from Manchuria have not yet materialised. Not the least serious consequence of the great earthquake in 1923 was the destruction of the naval oil tanks at Yokosuka,

involving the loss of seventy thousand tons of the precious fuel.

In recent years the Japanese Navy has paid marked attention to aviation, and from small beginnings a powerful and efficient flying corps has been built up. At the present time at least 150 aeroplanes are serving with the fleet, while a further 300 are kept in reserve. The personnel of the naval air service numbers about 450 officers and 3600 men. The first aircraft-carrier, Hosho, was completed in 1922. She is of 9460 tons, with a speed of 25 knots, and has accommodation for twenty-six aeroplanes. Although some trouble has been experienced with the method of smoke discharge, always a difficult problem in ships of this type, the Hosho is on the whole a success. It is not the least achievement of Japanese constructors that they should have succeeded in producing an efficient aircraft-carrier on a displacement of less than 10,000 tons. Two of the uncompleted battle-cruisers, Amagi and Akagi, rendered surplus by the Treaty were reserved for conversion into 'plane-carriers. The first-named was afterwards destroyed in the earthquake, and it was then decided to replace her by the Kaga, originally designed as a battleship, and therefore a less suitable vessel for the purpose on account of her low speed. The Akagi, as reconstructed, is of 26,900 tons and 28½ knots, with a capacity of fifty aeroplanes. The Kaga is slightly heavier but five knots slower. She is reported to carry fifty-five machines. Neither vessel compares in speed or capacity with the huge American carriers of the "Lexington" class, but they are superior in armament, each mounting ten 8-in. guns.

Japan is particularly strong in cruising ships, of which she has built twenty-five within the last ten years. They are chiefly remarkable for high speed, all but the first two having been designed for 33 knots. No other navy has now, or will have for some time to come, an equal number of rapid cruisers. The list is headed by four ships of the "Nachi" class, which

were designed in 1922, though their completion has been delayed for reasons of economy, and the last of the quartet is not expected to be ready before the end of 1928. They are built to the " standard " displacement of 10,000 tons, which at full load is nearer 12,000 tons; they are engined for a speed of 33½ knots, and their main battery consists of nine 8-in. guns in triple turrets. Four more cruisers of this type are included in the 1927 building programme, for completion in 1931. Of less conventional design are the four ships of the " Kako " class, which, on paper at least, are the most formidable cruisers of their size in the world. Displacing but 7100 tons—which may, however, be the misleading " standard " figure—they not only conform to the 33-knot speed average of their predecessors, but carry the powerful armament of six 7·5 or 8-in. guns. In the first two units of the class the six big guns are on single mountings. This system has two important tactical advantages: first, it enables the maximum rate of fire to be maintained by each gun; secondly, it reduces the risk of more than one gun being put out of action by a single hit, a risk that is doubled by the twin-turret, trebled by the three-gun method of mounting, and even quadrupled by the arrangement of guns as in the American " Omaha " class. The third and fourth vessels of the " Kako " class are reported to have their six big guns mounted in pairs.

In weight of artillery the Japanese ships of this group are so superior to foreign vessels of equivalent tonnage, which mount nothing heavier than the 6-in. gun, that the result of a duel should be a foregone conclusion. If, however, more complete data were available, the fighting power of the Kako and her sisters might be found to be rather less than it appears to be, and it would be specially interesting to learn how the great weight of tophamper affects their behaviour in a rough sea. Nevertheless, it is to the credit of Japanese designers that they should have

broken away from the tradition which quite arbitrarily inhibits the mounting of heavy guns in ships of comparatively small displacement. Unpalatable though it may be, the truth is that Japanese naval architects in recent years have shown more enterprise in man-of-war design than their Western *confrères*.

Besides the large cruisers already described there are fourteen smaller ones, practically uniform in design, averaging 5600 tons, with a maximum speed of 33 knots. They have proved excellent sea-boats and their radius of action is comparatively large: 6000 miles at 15 knots speed and 10,000 at 10 knots. They are, however, rather feebly armed with seven 5·5-in. 82-pdr. guns, six of which bear on the broadside, and their original fighting value has been seriously impaired by the advent of the big "Treaty" cruisers, with an 8-in. armament. The three smallest cruisers of modern build—Yubari, Tatsuta, Tenryu—are magnified flotilla leaders. In the table below the leading particulars of these ships are compared with those of H.M.S. Carlisle, a typical "Fleet cruiser" of the British Navy:

	Yubari.	Tatsuta.	Carlisle.
Length . .	435 ft.	440 ft.	425 ft.
Beam . .	39½ ,,	40¾ ,,	43½ ,,
Draught . .	11¾ ,,	13 ,,	14 ,,
Displacement .	3,100 tons	3,500 tons	4,190 tons
Speed . .	33 knots	31 knots	29 knots
Armament . .	Six 5·5 in. Four torpedo tubes.	Four 5·5 in. Six torpedo tubes.	Five 6 in. Six torpedo tubes.

According to the *Asahi*, the officials at Sasebo dockyard, where the Yubari was built, are very proud of the ship, which they believe to mark a distinct advance in light cruiser design. In spite of her reduced size they consider her to be practically equal to H.M.S. Carlisle in fighting power—six 5·5-in. 82-pdr. guns against five 6-in. 100-pdrs.—while she is four knots faster than the British ship. Three old

cruisers of the " Hirado " class, 4950 tons, 26 knots, eight 6-in. guns, and a fourth ship, the Tone, of 4100 tons, are still in service. Including these Japan has twenty-nine effective cruisers built or completing, with four more under construction or projected. Their functions in war have been officially stated to be, in order of importance, patrolling the trade routes, co-operating with the battle fleet, and escorting destroyer flotillas. It is clear, however, that the high speed and extensive radius of the majority would qualify them to act as commerce raiders if need be. Besides her modern ships Japan still retains on the active list seven old armoured cruisers, which are now rated as first-class coast defence vessels. Notwithstanding their great age they would be useful as convoy guards, thanks to their fair speed, powerful armament, and robust protection, and it is probably for this reason that they are kept in commission.

In recent years the destroyer flotilla has been steadily augmented until it now has a strength of more than one hundred boats, including those building. At least half are of the first-class type, with a displacement of 1000 tons or more. The standard Japanese destroyer is a vessel of 1400 tons and 34 knots, with an armament of three or four 4·7-in. guns and six torpedo tubes, but the newest boats will be of 1800 tons. Reasons of economy have prevented the adoption of the 6-in. armament originally proposed, and they will therefore carry 4·7-in. guns.

Remarkable progress has been made with the development of the submarine force. Eight years ago it consisted of a limited number of small boats of doubtful efficiency, incorporating what were supposed to be the best features of British, French, and Italian practice. To-day Japan has more ocean-going submarines than any other Power, and her latest craft are believed to be unsurpassed for reliability. Among them are improved editions of the German submarine cruisers built in the later stages of the war, of which

Japanese experts made a thorough examination. While full details are impossible to obtain, the following is believed to be an authentic summary of the present flotilla :

Eight submarine cruisers, 2100 tons, speed 23 knots, two 4·7-in. or 5·5-in. guns, six torpedo tubes. Actual cruising endurance, 11,000 miles. Two of these were completed in 1926. The other six should be ready by the end of 1928. At least two are minelayers, with a reduced number of tubes and a supply of 60 mines.

Fourteen oceanic submarines, 1200 to 1500 tons, speed 20 knots, one 4·7-in. gun, six torpedo tubes. Cruising endurance 8000 miles. Three of these are minelayers.

Twenty sea-going submarines, 900 to 1000 tons, speed 17–18 knots, one 12-pdr. gun, four to six torpedo tubes. Cruising endurance 6000 to 7000 miles. Some of these are fitted for carrying mines.

Twenty-six sea-going submarines, 700 to 750 tons, speed 17–18 knots, one 12-pdr., six torpedo tubes. Cruising endurance 5000 miles.

Seven coast-defence submarines, 300 to 450 tons, speed 14–16 knots; no guns, two or four torpedo tubes.

A few older boats of small fighting value, used only for training purposes.

Japan, it will be seen, has no less than twenty-two submarines larger than 1000 tons, built and building. Of corresponding boats the British Empire has only thirteen and the United States no more than six. Moreover, the Japanese submarines have a higher speed average than the British or American boats, and their cruising endurance is believed to be greater. In this type of vessel Japan has undoubtedly gained a considerable lead over all other countries.

During 1922–24 a series of disasters, involving the loss of several boats and many lives, led to doubts being expressed as to the efficiency of Japanese sub-

marines and the competence of their crews. That a certain feeling of insecurity existed among the officers and men engaged in this service was made evident by the action of the Navy Department, in April 1924, in inviting officers attending the submarine training school at Kure to submit unsigned statements of their views on this question. The response is said to have been eminently satisfactory, one and all expressing their complete confidence in the new boats and their eagerness to serve therein. There is not the least doubt that the submarine branch of the Japanese Navy is efficient, highly-trained, and formidable. In an address delivered in London a few years ago Baron Hayashi, the former Japanese Ambassador, quoted foreign experts as having observed that the physical and mental strain of submarine duty was felt less by Japanese sailors than by Europeans, and that Japanese submarine crews were able to remain at sea for much longer periods than crews of any other race.

At the end of the Great War and for at least five years thereafter the Japanese Navy was inferior in technical equipment to the navies of Britain and the United States. This was due to several causes, but principally to lack of first-hand experience of the great advance in tactical methods—gunnery, torpedo, mining, anti-submarine devices, wireless, etc.—which had been achieved during the war. As late as May, 1925, the correspondent of *The Times* in Tokyo wrote that "in gunnery control the Japanese, for want of external assistance, have come to a virtual standstill and are fast losing ground. They can know little about the latest methods of long-distance firing and indirect firing. As for aerial co-operation, their communication between aeroplanes and ships is, at present, believed to be so poor that it is doubtful whether they could efficiently utilise aerial fleet reconnoitring at all."

Information from other sources sheds rather a different light on the matter. For example, one of

the European naval attachés who visited the gunnery school at Yokosuka in 1924 was impressed with the up-to-date methods of training in vogue. Again, in the fleet manœuvres of 1925 all ships took part in long-range firing practice, and aircraft were freely employed for "spotting" duty. Photographs of Japanese battleships and cruisers show them to be equipped with range-finders and other gunnery control instruments of modern pattern. In view of this evidence reports of the Navy's backwardness in gunnery or any other branch of war training should be treated with reserve. It is conceivable that Japan, for reasons of policy, does not wish the world to form too high an opinion of her naval strength, in which case the somewhat pessimistic rumours which sometimes gain currency would be explained.

These were especially prevalent after the earthquake, which for a time was widely believed to have dealt a severe blow to her naval power. It is true that the Navy, in common with other national institutions, suffered heavy financial loss, the damage amounting to over £9,000,000. Yokosuka dockyard was devastated, a huge quantity of fuel oil was lost, and two important ships were badly injured. But the effects of the disaster were transitory. Within two years the Yokosuka establishment had been rebuilt on modern lines and the damaged ships repaired or replaced. Moreover, the Navy escaped the severe financial retrenchment to which all other public services were subjected for several years after the earthquake. Thus the Navy Estimates for 1924 amounted to £23,800,000, and although the vote for maintenance showed a decrease—due in great measure to the operation of the Washington Treaty—the vote for new ships and naval aviation was substantially increased. The gross reduction in naval expenditure after the earthquake was £5,360,000, but against this must be set a supplementary estimate for £10,000,000, spread over several years, "for reconstruction of

naval establishments damaged by earthquake and fire." The ultimate effect of the great national disaster on Japanese naval power has therefore been slight.

At the present time the personnel of the Navy consists of 5350 officers and 58,000 men, a reduction of about 12,000 as compared with the pre-Treaty establishment. The following notes on this subject were penned by the writer in another place: "The officers seem indifferent to personal comfort. In Japanese warships visited by the writer the ward-rooms and cabins were cheerless to a degree, and there seemed no room in the wardroom bookshelves for any literature of a non-technical character. The impression one obtains is that the Japanese naval officer has little time or inclination for any pursuit outside his profession. The lower-deck seaman, if superficially less alert, mentally, than the British bluejacket, appears to be zealous and well-trained. Contrary to what is often asserted, he has zest and initiative. The courage and discipline of Japanese seamen was abundantly proved in the contests with China and Russia, nor is there any reason to suppose that these qualities have deteriorated with the efflux of time. Although conscription is resorted to, the navy is manned for the most part by volunteers, who enlist for a term of six years. A large percentage of time-expired men sign on for a further period of service. As a result, all the really important duties on board ship are performed by long-service men, the quota of raw recruits in a commissioned ship being very small.

"Another feature peculiar to Japanese naval organisation is the maintenance of all effective ships on a footing of immediate readiness for action. This is rendered possible by the large establishment of personnel borne in the annual navy budget. At a time of crisis it would not be necessary to mobilise the reserves in order to man the first- and second-

line ships. There are sufficient officers and men on the active list to provide full complements, not only for all these vessels, but for such auxiliary craft as would be requisitioned by the navy on the outbreak of war. When this had been done, ample reserves would remain available for subsidiary purposes. In this connection the following note from a Japanese year-book is worth quoting :—' Differing from the system followed in England, the Japanese Admiralty organises its staff on the plan of filling with officers of the active service the necessary complement at the outset of an emergency. This is the reason why our navy is apparently overstaffed as compared with that of Great Britain. The British fleet, which totals about 2,330,000 tons, has a staff of deck officers, from midshipmen to full admirals, numbering 3,111. The corresponding figures for our fleet are 650,000 and 2190 respectively. Reduced to a ratio per ton, the British fleet has 1·35 officers against 3·42 for the Japanese.' " *

It cannot be too often repeated that in estimating the strength of Japan's naval armaments full allowance must be made for the geographical factor. When two navies are in close proximity, such as the British and the German, or the British and the French, their relative strength may be roughly determined by the usual method of counting up tons, guns, and men, since each could confront the other practically in full force. This method of comparison, however, is misleading when applied to naval power in the Far East, for while Japan could bring her entire strength to bear at any point within the north-west Pacific, no other country could employ more than a fraction of its fleet in those waters without proper base facilities, which at present do not exist. Relatively, therefore, the Japanese navy is very much stronger than a mere computation of its ships and men would suggest. " This great

* *The Nineteenth Century and After*, Nov. 1925.

navy" (wrote the *Japan Chronicle*, when the new building programme was introduced) "is to be built solely that Japan may be able to do things on the Asiatic mainland and present them to the world as accomplished facts without running the risk of the Powers offering 'advice' such as they offered in 1895 regarding Liaotung. The expansion of the navy is not for the purpose of being aggressive, but for the purpose of deterring protest if aggressive action should for any reason be committed."

Rumours have been heard from time to time of the adoption of a "new defence policy," which would involve an extension of Japan's military and economic hold on China. The alleged plan, first revealed in the early part of 1922 by the Tokyo newspapers *Nichi Nichi* and *Yomiuri*, and re-discovered four years later by certain organs of the American Press, is based on the very reasonable supposition that Japan, not being able to count on the support of allies, must depend entirely on herself in a future war. In that event the safety of her communications with China would become of paramount importance, for reasons already explained. It was therefore proposed to establish advanced lines of defence, behind which the essential traffic in foodstuffs and raw material between the mainland and Japan could be conducted without interference. The outer maritime line was to run from Kamchatka to Formosa, the inner one from Japan to Korea. On land the defensive rampart was to extend from Hankow, on the Yangtse, to Saghalien, traversing Shantung, Manchuria, and Siberia, approximately parallel with the outward line of sea defence.

That such a plan was actually drafted in the Tokyo War Office is by no means improbable. If Japan went to war with a great Power she would be fighting for her life, and knowing this she is naturally at pains to take such precautions as are feasible. But between the drafting of a strategic plan and its ful-

filment there is often a wide gulf. The scheme in question would entail the building of thousands of miles of new railways in China and Korea, the development of harbours both on the mainland and in Japan itself, an enormous extension of Japanese commercial enterprise in China, and, above all, the almost complete subjugation of that country in time of peace, either by political or military means. Since none of these things has happened to date it is a safe assumption that the plan, presuming it to be genuine, has been pigeon-holed as premature, or, what is more likely, as impracticable.

It is part of the normal duty of naval and military staffs to explore every contingency that might arise in war and to suggest counter-measures, however remote the danger and however drastic the remedy. It will not be forgotten that the German General Staff, long before the Great War, had worked out in minutest detail a project for the invasion of the United States, according to the published works of Baron von Edelsheim, a former member of that body. In any case, the revelation that Japan would endeavour in time of war to safeguard her trade with China is no more startling than the disclosure that Great Britain, in similar circumstances, would do her utmost to keep open the sea routes on which she depends for her existence.

If the Japanese Navy has ceased to be an object of apprehension to the Western Powers that have a stake in the Far East, the fact is due not so much to its reduced strength since the Washington Conference as to the modification which Japan's foreign and domestic policies have undergone in recent years. Without going so far as to assume that she has definitely turned her back on militarism, it is evident that this spirit no longer predominates in the councils of the nation. On comparing the situation in 1921 with that now existing a remarkable change is seen to have occurred. Six years ago Japan was pursuing

a " forward " policy on the Asiatic mainland. She maintained strong garrisons in Shantung, Manchuria, and Mongolia, and was firmly entrenched on Russian territory in Saghalien and Siberia. Western traders found it increasingly difficult to hold their own in the Chinese market on account of the obstructive tactics of Japan, who made full use of her political ascendancy and virtual control of local communications to further the interests of her nationals at the expense of the foreigner. More than a shade of arrogance was perceptible in her attitude towards the white races, notably during the joint Siberian Expedition, when the Japanese officers took a very high tone with their European and American colleagues.

Nor was Japan content to assert herself in Eastern Asia alone. Writing early in 1922, a British observer said : " As a result of her emigration policy, Japan has forced a Japanese question in California and most of the American States on the Pacific coast; a Japanese question in Hawaii and the Philippines; a Japanese question in Canada and Australia. She has consistently maintained that this question must be settled on a basis of racial equality, which is the only unction that will satisfy the supersensitive Japanese national honour." As the world afterwards discovered, this insistence on racial equality did not prevent Japan herself from imposing severe restrictions upon the entry into her dominions of Chinese and Koreans, though the latter were her own subjects. Since her aggressive foreign policy coincided with the building of a navy of the first magnitude, the reinforcement of the army by several divisions, and the energetic development of her munitions industry, it is no wonder that she came to be suspected of harbouring designs against the world's peace.

Whether or no the suspicion was well-founded we are never likely to learn. At all events it has since been dissipated by the actions of Japan herself. The Washington Conference marked a turning point in

her political career. It taught her that the Western communities, in spite of their fervent desire for peace on any terms consistent with honour, were determined to resist the pretensions of any one Power to dominate the Far East or to close the " open door " in China. Had Japan proved recalcitrant she would have had to reckon with an Anglo-American alliance, in fact if not in name. As it was, she bowed to the inevitable, the more readily, perhaps, because the militaristic policy of her rulers, with its concomitants of heavy taxation and the threat of war, had begun to generate serious unrest among the populace. It is a well-established fact that Communist propaganda in Japan was never so fruitful as in the three years following the Great War, a period in which the General Staff had the controlling voice in domestic and foreign policy.

There is no doubt that the Washington Conference had a profound psychological effect on Japan. The fact that the greatest military nations of the world should meet in conclave for the express purpose of negotiating a reciprocal reduction of armaments, and that this purpose, contrary to all precedent, should be in large measure accomplished, was a severe blow to the Samurai doctrines on which the Japanese masses had been nourished. From 1922 onward liberal principles began to gain ground. The retrocession of Shantung marked a turning point in Japan's relations with China; the evacuation of Siberia and Saghalien paved the way for negotiations with the Soviet Government which eventually led to the Russo-Japanese Treaty of February, 1925, and the settlement of long-standing disputes. Intercourse with the United States became more cordial, and the practical demonstration of American sympathy when earthquake and fire devastated Tokyo, Yokohama, and the surrounding country in 1923 did much to allay the bitterness which had been caused by America's attitude on the immigration question.

It is true that the promotion of goodwill between the two countries sustained a check in 1924, when Congress passed the Immigration Bill, thus abrogating the " Gentlemen's Agreement " and barring Japanese nationals from American territory, although the peoples of the Near East, and even African negroes, could still enter the country under the quota system. In former years such a direct and gratuitous affront to a proud nation might well have produced the " grave consequences " to which Ambassador Hanihara referred in his letter to the American Secretary of State. Congress, to whom the letter was transmitted, saw fit to treat it as a challenge, and promptly retorted by making the exclusionist clauses of the bill even more drastic than originally contemplated. Japan showed on this occasion a dignity and forbearance that did her infinite credit. Though the papers clamoured for reprisals, the Government refused to be stampeded into an anti-American policy that would inevitably have provoked a dangerous crisis.

Two years later Japan gave further proof of her peaceful intentions by announcing her resolve to discourage the emigration of her nationals to countries where they were not welcomed. Henceforth, it was intimated, every effort would be made to divert the overflow of population to the more sparsely inhabited regions of Japan itself and to Korea, Formosa, and Manchuria. If this policy is adhered to it will eliminate one of the most serious causes of friction between Japan on the one hand and the British Empire and America on the other. Similar moderation has been shown by Japan in her recent dealings with China. These circumstances, taken in conjunction with the extension of the franchise and the Cabinet's rigid control of naval and military expenditure, furnish conclusive evidence of the waning power of the military caste. It seems clear that Japan, so far from wishing to embark on foreign adventures, is anxious to reduce her external commitments in order

to be free to solve the urgent domestic problems with which she is confronted. There is in any case no suggestion of menace in her present policies. It is for the Western Powers, on their side, to refrain from actions in the Pacific which might be interpreted as provocative, since nothing would be more calculated to check the growth of Japanese liberalism and at the same time to restore the declining prestige of the militarist party.

CHAPTER XII

FRENCH NAVAL POLICY AND ITS REACTIONS

A FEW years ago it would have been difficult to write informatively on the naval policy of France, for at that time French statesmen, and even French strategists, were still uncertain as to what policy should be pursued with regard to the development of their naval power. It was by no means only a question of *matériel*, though even on this subject the most conflicting views prevailed, some officers urging the construction of battleships, while others condemned the Dreadnought as obsolete and pinned their faith to speedy cruisers, submarines, and aircraft. The French Parliament desired to know first the rôle of the navy in future national defence. To lavish money on new ships without previously determining their function in an emergency would be folly, it was argued. On the eve of the Washington Conference a French admiral was invited to outline his country's post-war naval plans. He replied: "The answer is simple; we have none."

But much has happened since 1921. It is a fact, ironic yet indisputable, that the rebirth of French naval power dates from the Conference. For three years following the peace the navy languished in almost complete neglect. Though its war losses had been cruel, nothing was done to repair the wastage. The bureaus, the dockyards, and the arsenals were treated very tenderly in the matter of retrenchment, because the horde of officials and workmen employed therein constituted a voting element that the politicians did not wish to estrange. So much money, indeed, was absorbed by the shore-going *personnel*

that little remained over for the fleet itself. As late as 1923 the civil employés of the navy numbered no less than 36,500, or nearly two-thirds as many as the fighting personnel. Repeated attempts have been made to cut down this preposterous total of ineffectives, but local interests have so far defeated every drastic plan of reduction. France, as a consequence, does not reap anything like the full advantage of her expenditure on naval defence.

At the close of the Great War French sea power, both relatively and absolutely, was at its lowest ebb. During the preceding four years no warship of major importance had been laid down. Construction in the war period was limited to anti-submarine craft and other *poussière navale*, most of which ceased to be of value immediately the crisis was at an end. Instead of building and arming ships for the navy, the dockyards and marine arsenals were engaged throughout the conflict in manufacturing munitions for the army. They furnished a large percentage of its artillery and transport equipment, but the construction of ships was virtually suspended. France, in effect, relied on the British navy to look after the " sea affair," while her own resources were devoted almost exclusively to the prosecution of the land campaign. At the same time, however, the French fleet co-operated loyally and gallantly to the full extent of its limited powers. The heroism and self-sacrifice displayed by the sailors of France in the Dardanelles attack evoked the warm admiration of their British comrades, and in many other theatres of war the French navy performed splendid service.

But by the end of 1918 it had shrunk to a miscellaneous collection of obsolete ships, its impotence being accentuated by the enormous dimensions to which the British navy had then attained. Without entering into a detailed analysis of relative strength, it may be mentioned that Great Britain had then forty Dreadnoughts and France only seven, a dis-

parity that was almost as marked in other types. Nor was it only *vis-à-vis* her cross-Channel neighbour that the sea power of France had waned. Before the war her fleet stood on an equality with that of the United States, and was considerably stronger than that of Japan. But she now found herself outdistanced by both of those countries, and, what was particularly mortifying, hard pressed by Italy, whose margin of strength in certain types was already superior.

None who knew the proud spirit of France, her inspiring naval traditions, and her extensive maritime commitments, can have supposed that she would tolerate indefinitely the humble status at sea to which circumstances had reduced her. Yet for a certain period she remained quiescent. Her inactivity in the early post-war years was due, first, to financial embarrassment; and, secondly, to the influence of her military leaders. Concerning the first reason, she appears to have taken a darker view of her financial future than she does to-day. As for the second, French military men naturally attached greater importance to the land than to the sea, contending, with every appearance of justice, that it would be madness to spend a franc on the naval service until the demands of the army, which were already imposing an onerous burden on the Treasury, had been satisfied. Had military opinion undergone no change, the French navy would still be a negligible quantity. But, in fact, the soldiers have since become ardent champions of a powerful navy, and it is to their advocacy that the navy owes in large measure its gradual restoration to power and prestige. The reasons for this change of attitude will be dealt with anon. Here it suffices to emphasise the support which the navy is receiving from the highest military authorities, for so long as this support continues the growth of French naval armaments will proceed without interruption, because in all questions of national defence the influence of the soldiers is paramount.

It is impossible to appreciate the French point of view on naval policy unless one takes into account the historical background. France is no parvenu in the community of naval States, no upstart claimant to a voice in the control of the seas. Her ships of war ploughed the waves when Charlemagne ruled, her fleet was puissant when the first Crusaders sailed for the East, and from those remote days to our own times it has been a commanding factor in world affairs. In the reign of Louis XIV it boasted an armada of forty ships of the line and sixty frigates, led by such doughty seamen as Jean Bart, Duquesne, and Tourville. French warships of that epoch were unrivalled in excellence of design, and under Colbert the system of administration became a model of efficiency. All through the seventeenth and eighteenth centuries the navy remained formidable, nor was its strength permanently impaired by the disasters of the Napoleonic Wars. For thirty years after Trafalgar there was little naval activity in Europe, but the old rivalry between France and England was dormant, not dead. By 1840 the renovation of the French navy was in full progress, and for the next sixty years Great Britain was often hard put to it to maintain her traditional supremacy. Ambition to challenge the sea power of Britain was undoubtedly the mainspring of French naval effort; but with the creation of the Entente Cordiale this motive lost much of its original force, and so it came about that in the decade preceding the Great War the French navy steadily retrogressed, and was soon left behind by the rapid expansion of the German fleet.

When France sent her delegates to the Washington Conference in November 1921, she had already begun to reconsider her naval position in the light of post-war political developments. Though the entente with Britain still existed in name, it had lost much of its former significance, The interests of the two countries were visibly diverging, and France thought it

high time to adopt an independent line of policy in respect of sea defence. Debates in the Paris Chamber during 1920 and in the spring of 1921 had foreshadowed the introduction of a new shipbuilding programme. Expert opinion in France was partial to the submarine, and eulogies of this arm, alike for defence and aggression, dominated the Parliamentary discussions. Applause greeted the declaration of M. de Kerguézec, Reporter of the Committee on Finance, that "the day on which France is backed by a fleet of 250 to 300 submarines she will be able to contemplate the future without any misgiving whatever."

In the meantine Captain Castex and other naval publicists had been lauding the achievements of German submarines and upholding the legality of their war on commerce. These outspoken French comments did not pass unnoticed on the other side of the Channel, where every favourable allusion to the German submarine campaign aroused feelings of bitterness and mistrust. It will be perceived, therefore, that the seeds of that controversy which marred the harmony of the Washington Conference were already sown. While France had a perfect right to her own views on submarine warfare, it was scarcely politic to air them so freely at a time when the British nation was still seething with anger at the recollection of Germany's U-boat misdeeds.

France, on her part, conceived herself affronted at the very outset of the Conference, when she found that the Hughes plan of limitation bracketed her with Italy. It was a sore blow to her pride and was resented as such. Important as are the maritime interests of the Italian State, they are less extensive than those of France, who in addition to a lengthy coastline in Europe and a thriving overseas trade has a great oceanic empire to defend. Moreover, it was only because of the special circumstances of the war period, referred to above, that the French navy had momentarily declined to a level that left it barely stronger

than the Italian. At no earlier period had Italian sea power approached the French standard. The presumption of naval equality between these two countries was a defect in the Hughes scheme, and one that was destined to have enduring consequences.

From the practical point of view, however, French interests were not prejudiced by the Limitation Treaty. The restriction of her battle fleet was of small moment to a State that had previously denounced the capital ship as an anachronism. Five large Dreadnoughts left unfinished at the end of the war were voluntarily scrapped in 1920, not because they were of obsolete design, but because French naval opinion regarded them as superfluous. Therefore the French grievance at Washington was based upon sentiment, but history warns us that national passions may be inflamed as readily by sentimental as by practical grievances.

In an interview published a year later, M. Georges Leygues, Chairman of the Foreign Affairs Committee of the Chamber and a former Minister of Marine, candidly avowed the reasons for the unpopularity of the Washington Treaty in France. He declared: "We refuse to accept naval equality with Italy, because France faces two seas, and has a vast empire only eighteen hours from Marseilles, with which we must amply protect our communications. We protest vehemently against taking a post-war instead of a pre-war formula of strength for establishing a naval ratio for the next ten years. This would penalise France for her enormous military efforts during the war at the expense of normal naval construction. The present weakness of our navy is abnormal. It may be impossible for France to add considerably to her navy for some years, but French national pride has been deeply wounded." M. Leygues added that a vote taken in the Chambers would be overwhelmingly against ratification of the Washington Treaty. Events fortunately proved him a bad prophet, but it is common knowledge that only the personal intervention

of M. Poincaré—who recognised the far-reaching issues involved—saved the Treaty from being cast ignominiously into the discard by an adverse vote in the Chambers.

Since influential French writers continue to assail the Treaty on the ground of its alleged injury to the material interests of their country, it may be as well to present briefly the other side of the case; and here the writer ventures to quote some remarks he penned in December, 1923, nothing having occurred in the interval to modify the thesis then presented :

" In view of the generous provision she has recently made for sea defence, it is not easy to see why France should affect to be so perturbed by Italian efforts in the same direction. France, so far from losing ground as against her Italian neighbour, will soon be in a much stronger position than she is at present. Moreover, unless the large expansion of her torpedo and submarine flotillas is offset by a corresponding increase in the light forces of other navies, she will have effected a considerable improvement in her relative standing towards all other naval Powers. French criticisms of the Washington Treaty are therefore difficult to comprehend. One thing is quite certain : but for that Treaty, and the consequent scrapping of so many tremendous battleships abroad, France would now be occupying an almost negligible place in the naval hierarchy. Furthermore, the Treaty has greatly enhanced the relative value of those cruisers and other light forces which are all that France, on her own admission, can afford to build. In sober fact, the Treaty has been a boon to France. Since she appears to have lost faith in the battleship, and, in any case, had no immediate intention of building more of these ships, the establishment of a common ratio of capital ship tonnage for herself and Italy can have no practical effect on her future naval position. France might have had reason to complain of the Treaty had it involved the limitation of all fighting

ships, but, in fact, it leaves her free to build an unlimited number of the very types which she believes to be most useful for her purpose."

As we have seen, the French and British delegates at Washington found themselves sharply at variance on the submarine issue. It must be remembered that Great Britain had, and still has, peculiar reasons for detesting the submarine and all its works—reasons dictated partly, but not wholly, by self-interest. When Lord Lee and Mr. Balfour protested so vigorously against the perpetuation of this weapon they were not thinking solely of its power to wound their own country. To them, as to many other thoughtful people in England and also in the United States, the submarine had become the symbol of organised barbarism and brutality, and it may be that they spoke as much from the heart as from the head. No doubt their denunciation went too far. In denying all legitimate military value to the submarine they did violence to notorious facts. That undersea craft are capable of most useful service when employed in a strictly lawful manner is attested by war experience.

But if the British case was overstated, it is to be feared that M. Sarraut and Admiral de Bon, on behalf of France, failed to make sufficiently clear their motive in demanding so large a ratio of submarine tonnage. Proof that French interest in the submarine was not merely academic was soon forthcoming. Less than six weeks after the Washington Conference the Paris Chambers adopted a provisional shipbuilding programme in which submarines occupied a prominent place. In the course of the debate on this measure M. de Kerguézec, now speaking as President of the Senate Naval Committee, expressed great satisfaction that the Conference had set no limit on the building of submarines, and declared, with the tacit approval of Ministers, that French naval policy would not be changed. "It is necessary," he added, "for France to have her hands free to pursue a foreign policy

suitable to her greatness and her dignity. We must not abandon our destinies to anybody, not even to our dearest allies." At the same time, both M. de Kerguézec and the Minister of Marine took occasion to insist that French submarines must "act in conformity with the laws of honour and humanity." No reference was made to the British view, expressed at Washington, that with submarines once let loose to attack merchantmen it is incredible in the stress of war that their powers will not be abused in the future as they were so grossly abused in the past. Although the supplementary Treaty forbidding attacks by submarines on merchant ships was signed as long ago as February 1922, it has not yet been ratified by France, and probably never will be.

The programme approved on March 17, 1922, has since been amplified to cover French naval requirements for a term of years. The project is divided into two sections, and it was announced in January, 1924, that the building of vessels authorised under the second half would be accelerated, with a view to having them all in commission by 1931 at the latest. For the sake of clarity the main provisions of the scheme are tabulated below :—

First Section.

3 cruisers of 8000 tons.
6 flotilla leaders of 2400 tons.
12 destroyers of 1400 tons.
12 submarines of 600–1150 tons.
1 aircraft-carrier.

All these vessels, together with several additional submarines, have since been completed.

Second Section.

6 cruisers of 10,000 tons.
15 flotilla leaders of 2400–2650 tons.
24 destroyers of 1465 tons.
2 submersible cruisers of 3000 tons.
30 submarines of 1550 tons.
7 submarine minelayers of 600–1300 tons.
2 surface minelayers.

These vessels are due to be completed by December 1931, but at the present rate of construction it is doubtful whether all will be ready for service by that date. The ultimate composition of the French High Sea Fleet, as laid down by the Naval Law of 1925, is to be as follows :—

(*a*) 178,000 tons of capital ships (in accordance with the Washington ratio).

(*b*) 360,000 tons of light surface vessels (cruisers and destroyers).

(*c*) 65,000 tons of submarines, or 90,000 tons including submarines for coast defence.

(*d*) About 150,000 tons of special vessels, such as oil tankers, minelayers, floating workshops, aircraft-carriers, and submarine depôt ships.

Twenty years is reckoned to be the serviceable life of capital ships, aircraft-carriers, and special vessels; seventeen years for cruisers, fifteen for destroyers, and twelve for submarines. The estimated total cost of new construction, exclusive of capital ships, over a period of twenty years is £118,500,000. It is already clear, however, that this estimate is likely to be exceeded, owing to the steady increase in the size of individual ships.

Such, then, is the new fleet that will be under the Tricolour a few years hence. It is not a high sea fleet in the broad meaning of the term. Save for six battleships of pre-war design—which in spite of having been modernised are much inferior to the best ships in the British, American, and Japanese fleets—the cruisers and the larger submarines, it is composed of vessels that would be most formidable in the comparatively narrow waters of the Mediterranean, though hardly less so in the English Channel. For overseas warfare they would be much less effective. France is therefore entitled to claim that her new naval policy is primarily defensive.

But the line of demarcation between defensive and aggressive warfare at sea, never clearly drawn, has

long ceased to be visible. If France were fighting Great Britain, she would doubtless consider herself to be acting on the defensive if her cruisers, destroyers, and submarines attacked British shipping wherever it might be found. Could a submarine, issuing forth from Cherbourg to sink a British ship twenty miles offshore, be regarded as engaging in defensive action, if a larger boat, doing the same thing a thousand miles out at sea, were adjudged to be taking the offensive? Tonnage is no longer a guide to the destructive potentiality of a war vessel. Most of the German cruisers that played havoc with British trade in the early part of the war were ships of less than 5000 tons, and four-fifths of the shipping lost in the U-boat campaign was sent to the bottom by submarines of 900 tons or less. In fact, there is scarcely one of the scores of vessels enumerated in the French building programme that could not, under favourable conditions, act effectively as a destroyer of commerce.

No rational person supposes that the destruction of British commerce is the sole, or even the cardinal, aim of French naval strategy, despite its traditional leaning toward the *guerre de course*. But it would be futile to deny the existence of a certain uneasiness at the large number of submarines included in the programme. Irrespective of new boats, France already possesses about forty submarines, of which at least half will remain efficient for a considerable time to come. This means that the completion of her building scheme will find her in command of more than seventy effective submarines, and Great Britain does not forget that Germany began the war with less than thirty submarines in hand. Parisian writers continue to deride the "morbid fears" entertained by their cross-Channel neighbours on the score of French naval activity, and are indignant at "the implication that France is preparing to emulate the misdeeds of German U-boat commanders at the expense of British shipping." There is, they maintain, no vestige of

excuse for "this wilful misunderstanding of French naval policy."

One can only reply that British misgivings arise from the published statements of eminent French strategists, to say nothing of the less responsible opinions which the French Press has voiced since the war. It is they who have reminded us, with ill-concealed pride, that the methods of sea "frightfulness" practised by Germany were first recommended by French naval officers, and were, indeed, strictly in accord with the doctrines preached by the *Jeune École*, of which the French Admiral Aube was the founder. More than this, one of the ablest of present-day French naval critics has declared the Germans to have been "absolutely right" in employing the submarine as they did.

French statesmen, it is true, have deprecated the use of submarines in such a way as to transgress the laws of humanity; but we know from bitter experience that in time of war the fighting men are prone to follow their own devices. The consistent opposition of the German Chancellor could not restrain the German military authorities from adopting ruthless submarine warfare in its extreme form. Consequently, when we find French naval experts of weight and standing openly praising the submarine as the one weapon capable of striking deadly blows at Britain's naval power, and when we also see France developing this weapon on a most formidable scale, it is inevitable that certain conclusions should be drawn of a nature not calculated to promote amicable relations between the two countries.

So much has been heard lately of the doctrines of the *Jeune École* that it may be useful to quote from the writings of Admiral Aube, who founded this school of progressive naval thought in the 'eighties of last century. It should be interpolated that the *Jeune École* was invincibly opposed to the battleship, arguing that, since France could never hope to com-

pete with wealthy Britain in the building of costly ironclads, she should devote all her resources to the production of smaller, cheaper, but deadlier craft, whose very multiplicity would render the seas unsafe for the mastodon. Under the impulse of this teaching, France, in the closing decades of the century, spent most of her energy in building squadrons of cruisers and veritable swarms of torpedo boats, all of which speedily became obsolete. In the end she found herself weaker at sea than before, notwithstanding a lavish outlay on construction, and but for the coming of the submarine and the aeroplane the *Jeune École* would have been hopelessly discredited. To-day, however, this school is again in the ascendant, and if Admiral Aube were still alive he would be the first to give his benediction to a building programme which reflects so faithfully his views on naval strategy.

Dealing with the "next war" with Britain, Admiral Aube wrote: "All of England's littoral towns, fortified and unfortified, whether purely peace establishments or warlike, will be burned or pitilessly ransomed by cruisers of great speed and power. In any future war France will come down from the heights of the cloudy sentimentality which has created that monstrous association of words, *rights* of war, and her attack on every source of English riches will become not only legitimate but obligatory." Elsewhere he wrote: "To-morrow war breaks out; a torpedo boat has sighted one of those ocean steamers freighted with a cargo of greater value than that of the richest galleons of Spain. The torpedo boat will follow at a distance, keeping out of sight, and when night comes on will, unobserved, close with the steamer and send to the bottom cargo, crew, and passengers, not only without remorse, but proud of the achievement. In every part of the ocean similar atrocities would be seen. Others may protest; for ourselves we accept in these new methods of destruction the developments of that law of progress in which

we have a firm faith, and the final result would be to put an end to war altogether." The fatal, facile doctrine that war can be abolished by intensifying its horrors appears still to persist in certain quarters abroad.

Although the name of Captain Castex has figured so often and so prominently in discussions on French naval policy, some uncertainty yet prevails with regard to what he has really written about the German submarine campaign. Lord Lee was accused of having misquoted this French writer in a discussion at the Washington Conference. But, in truth, the study entitled "The Synthesis of Submarine Warfare," which Captain Castex contributed to the semi-official *Revue Maritime* in 1920, what time he was on duty at the Ministry of Marine and as professor of naval strategy at the Naval and War Staff College, is too clear to admit of misconstruction. Here is one passage, not wrenched arbitrarily from the context, but in keeping with the whole tendency of the article :—

"Submarine warfare has frequently been called 'piracy,' and 'pirates' those who participated in it. These expressions, translated in a weak manner, a little too openly, the feelings which at the time were entertained by most of Germany's foes, the surprise created by this unusual method of warfare, the unreadiness in facing it, powerlessness in regard to it, and anxiety as to its final results. Astonished, taken by surprise, momentarily impotent, anxious, they found nothing better to do than to show their vexation by stamping their feet and calling down abuse upon the evil opponent, who despised the rules of fair play and struck in secret. . . . Before thus attacking the Germans in words we should have remembered that this cruising war, using torpedoes, was, like many other novelties of our planet, the application of a conception most essentially of French origin. Further consideration leads to the admission that the Germans

had an absolute right to follow this kind of warfare. Germany had the right, for her cause, to put in action all her means, and to require of her submarine armament the doing of the utmost harm to her enemy. This constituted, as it were, a fencing thrust aimed at the lower part of the body, but a perfectly regular one. The omission of warning previous to torpedo action, which has given rise to so many protests, is not so inadmissible as at first appeared. To this contention the Germans have replied, not without some semblance of right on their part, that they had 'once and for all' warned all ships not to proceed through the dangerous zone."

It has always been recognised in Great Britain that Captain Castex speaks for himself, not necessarily for the French Government or the French nation. None the less, his opinions cannot be ignored, and they unquestionably acquire weight from the semi-official position which the author occupied when he gave utterance to them. Is it, then, surprising that the publication of such views, closely followed by the introduction of a large submarine-building programme, should have caused French naval policy to be regarded with suspicion? When in addition we see France systematically expanding her air force, which is already supreme in Europe, and legislating for a huge war reserve of modern aircraft, the wonder is that British public opinion should remain almost indifferent to martial preparations that might conceivably be held to represent a direct menace to Great Britain.

In responsible British circles, however, France is not credited with aggressive designs against her island neighbour. Here, at least, a clear appreciation of French strategic problems exists. The object of these imposing armaments by sea and air is, first and foremost, to ensure the safety of the sea routes which link France with her vast African domain. During the Great War nearly a million troops were transported from Africa to swell the French legions in the field.

But for this host of coloured levies depopulated France could never have maintained her armies at the requisite strength. As a consequence, reinforcements from Africa now play a highly important part in the scheme of national defence. Every plan of strategy and mobilisation framed by the General Staff postulates the punctual arrival on French soil of half a million or more fighting men from North Africa, Senegal, and the Niger. For this reason sea power has for the first time become a dominating factor in French military strategy, and here we discover why Marshal Foch and other eminent soldiers are displaying a lively interest in the strength and welfare of *l'armée navale*. Upon the safety of the sea routes in time of emergency depends the prompt arrival of those African levies without which France could not bring her army up to war strength. It was with a view to this paramount need of open sea communications that the new shipbuilding programme was launched with the full approval of the highest military authorities.

But while all are agreed that command of the Western Mediterranean is a *sine qua non*, conflicting opinions prevail as to the best method of securing it. For the present, preference is given to a combination of fast cruisers, torpedo vessels of abnormal gun-power and speed, submarines, and aircraft, which it is thought would be able to form an impenetrable screen across the sea lanes by which the transports conveying African troops must voyage to France. No hostile battleship, it is argued, could approach this guarded zone without courting destruction. On the other hand, there is a dissentient school in the French navy which holds that intruding battleships could not be dealt with so easily, and should be met by French ships of equivalent power. So far, however, this view has not been accepted.

It is, in the writer's judgment, no more than a regrettable coincidence that many of the naval craft

by which France hopes to guard her vital line of communication with Africa should be precisely of the types that she could employ with maximum effect in a war with Great Britain. But the coincidence is not at all remarkable when we look into the circumstances. Since cruisers and their lighter satellites are cheaper than Dreadnoughts it is natural that they should appeal to a country such as France, whose coffers are by no means bursting with gold. Furthermore, these light vessels, both surface and submersible, may really possess, collectively, a higher tactical value for Mediterranean warfare than a fleet of Dreadnoughts. That the majority of them would make very efficient commerce destroyers is true, but beyond the writings of Captain Castex and other publicists of his way of thinking there is nothing to indicate that the current French programme was drawn up with any special reference to Great Britain. So far, at all events, it has had no marked reaction on British naval policy, from which we may infer that its true significance is not misunderstood in this country.

Frenchmen, on their part, have taken an equally sensible and objective view of the concentration of British naval force in the Mediterranean. Within recent years the British fleet in those waters has been so heavily reinforced that it is now almost equal in power to the entire French navy as at present constituted. The presence of this immense fleet so close to her shores, and its obvious ability to menace the trans-Mediterranean routes that are vital to her safety, does not appear to have excited misgiving in France. Indeed, the calm and rational tone in which the French newspapers, with few exceptions, have discussed the matter is an assurance that Anglo-French relations, are, at bottom, rather more amicable than superficial observation might suggest. It is well known in France that the gravitation of British naval strength towards the East is influenced by considerations which have nothing to do with Euro-

pean politics. Since the war the attention of British strategists has been focussed on the Pacific, and the choice of Malta as the headquarters of our strongest fleet has a purely fortuitous bearing on the European balance of power.

Some brief notes on the present and future composition of the French navy may be added. It is weakest in capital ships, of which it contains only six of Dreadnought type, and these not of the latest design. At best they serve as a stiffening to the lighter craft, which represent the real spearhead of the navy. The former German cruisers now under the French flag are mostly obsolete, and not more than two or three will remain effective when all the new ships are in service. If the programme is completed in good time France will possess in 1932 a squadron of about twelve cruisers, six of these being of the powerful 10,000-ton type, armed with 8-in. guns. She will have, besides, approximately eighty destroyers, including twenty-one which in tonnage and gun-power are the equal of small cruisers. The majority of the destroyers will be armed with 5·1-in. guns, a battery that would enable them to make short work of all save the largest foreign destroyers now afloat. By the same date she will have not less than seventy submarines, without reckoning boats which may be scrapped in the interval on account of age and deterioration. Many of these submarines will be of the long-range, ocean-going type. It is noticeable, also, that the new destroyers have a steaming radius of 3000 miles.

Concurrently with the building of this new material, reforms have been effected in the governance and personnel of the navy. Naval bases in the Channel, the Mediterranean, and along the African littoral have been equipped with new defences. The active fleet frequently engages in manœuvres at sea, and nothing is left undone to promote efficiency in all tactical exercises. There is, however, a serious shortage of personnel, owing mainly to the completion of so many

new ships. Unless remedial measures are taken in time, the deficiency a few years hence will, it is estimated, amount to 450 officers and 15,000 men. Moreover, the reduction in the term of compulsory service has necessarily lowered the standard of training among the lower-deck ratings. This notwithstanding, the French navy of to-day aspires to, and probably has attained, a higher level of preparedness for war than was deemed necessary in 1914. The exhilarating effect of army patronage, which was never extended in pre-war days, is very apparent. Almost for the first time in the annals of France, the prestige hitherto monopolised by the soldiers as the true defenders of *la Patrie* is now shared in equal measure by the sailors. From now onward the French navy is destined to count as a weighty factor in world politics.

CHAPTER XIII

MEDITERRANEAN, NORTH SEA, AND BALTIC

Reference has been made in an earlier chapter to the difficult problems of naval strategy which confronted Italy before the war. Her position in the Adriatic, where a powerful Austro-Hungarian fleet had at its disposal a chain of excellent and well-fortified bases, was always precarious, for the eastern Italian littoral has few harbours that can be used by heavy ships, and the defence of this exposed coast had therefore to be entrusted in the main to mobile artillery and light flotillas. Had the Austrian naval command shown more enterprise during the war it might have compelled the Allies to maintain in the Adriatic a much larger force than was in fact found to be necessary, thus rendering it more difficult to cope with the submarine menace in the Mediterranean. As events proved, the Italian Navy, aided by British and French contingents, was able to hold the Austrian fleet in check, and the operations of the latter had no material result.

Owing to the cautious tactics pursued by the enemy, the Italians had few opportunities of taking the offensive, but such as did occur were made the most of. Tiny motor boats more than once penetrated the Austrian coast defences and torpedoed warships at anchor. In the summer of 1918 two of these little craft, commanded by Captain Rizzo, boldly attacked an Austrian battle squadron in the open sea, sank the fine Dreadnought Szent Istvan, and so demoralised the Austrians that they forthwith abandoned a projected attack on the Otranto barrage. Had this

attack succeeded it would have enabled enemy submarines to pass through the Straits without hindrance for some time to come, in which case shipping casualties in the Mediterranean must have increased. After losing the Szent Istvan the Austrian fleet renounced all further activities, so that Captain Rizzo's splendid exploit had a marked effect on the subsequent course of the campaign at sea.

Throughout the war period Italian industry, like that of France, was principally engaged in manufacturing munitions for the land forces. The navy, however, was not neglected. In spite of the heavy demand which army requirements made upon their resources, the dockyards were able to undertake a considerable amount of new construction, including fifteen destroyers, about thirty submarines, several monitors, and a swarm of high-speed motor craft. The production of so much new tonnage in a period of industrial stress reflected great credit on Italian methods of organisation. Thanks to this reinforcement the Navy at the close of the struggle was still formidable, though it had lost heavily in battleships and cruisers, several of which were destroyed by treachery. For some time after the war the national defences were neglected, but with the advent of the Fascist régime a more vigorous policy was pursued.

The importance of sea power is a favourite theme with Signor Mussolini, who has repeatedly declared that without a strong navy Italy cannot hope to realise her destiny. Admiral Thaon de Revel, the first Minister of Marine in the Fascist cabinet, announced his aim as being " to make the Navy a force that will be constantly and instantly ready for all emergencies." The Admiral was eventually relieved of his portfolio by Signor Mussolini, but it is not denied that many beneficial reforms were effected during his tenure of office. A large number of surplus shore appointments held by senior officers were cancelled, the incumbents being given the choice of going to sea

or retiring from the service. Non-effective charges were substantially reduced. The entire fleet was drastically overhauled, obsolete ships were weeded out and all efficient units placed in commission. Training at sea, of which there had been little since the war, now took the place of harbour drill, the fuel allowance for the sea-going fleet was increased, and a strenuous programme of evolutions and manœuvres drawn up. During 1926 more than half the effective ships were in commission with full crews, and it is proposed to increase this percentage in the near future. Large sums have been spent in modernising the artillery and torpedo equipment of the fleet.

The forces permanently in service are organised as follows :—One battleship as fleet flagship; one battle division of four battleships; one cruiser squadron consisting of two divisions, each of five cruisers and flotilla leaders; one destroyer division with a cruiser as flagship and three flotillas of nine to ten boats each; one submarine division, comprising two flotillas each sixteen to twenty-four boats strong, with four depôt ships; one anti-submarine division of fifteen motor torpedo-boats; a special service flotilla of four destroyers for the Adriatic; and various auxiliary craft. These formations will be augmented as new ships become available. The building programme adopted in 1923 for completion by 1930–31 embraces five 10,000-ton cruisers of the " Treaty " class, armed with 8-in. guns; twenty destroyers and twenty submarines. New naval bases are in process of creation in Sardinia and Sicily. In the former island the port of Cagliari is being developed as a fleet anchorage with the necessary fortifications, while on the other hand the naval station at Maddalena, which lies within range of artillery mounted at Corsica, has been abandoned. Trapani, on the west coast of Sicily, will serve in future as a base for destroyers, submarines, and aircraft.

The creation of these new bases means, of course,

that Italy, having secured absolute control of the Adriatic, is preparing to mass her naval forces in the Mediterranean, where they already constitute an important element in the balance of power. When the new building programme matures in 1931 the Italian Navy will possess the following material, which for purposes of comparison is tabulated with that of the French Navy at the same date.

	Italy.	France.
Dreadnoughts . . .	5	6
Pre-Dreadnoughts . . .	2	3
Armoured Cruisers . . .	3	8
Treaty Cruisers . . .	5	6
Other Cruisers . . .	5	6
Flotilla Leaders . . .	11	22
Destroyers	71	83
Submarines	60	70 to 90

In effect the superiority of the French fleet is greater than these figures indicate. Thus three of the French Dreadnoughts mount 13·4-in. guns and the others 12-in. guns, while the Italian ships have a uniform armament of 12-in. Again, the French pre-Dreadnoughts, each armed with four 12-in. and twelve 9·4-in. guns, are much more powerful than the corresponding Italian vessels. Additional to her six "Treaty" cruisers France has three 8000-ton ships of high speed, to which there is no counterpart on the Italian side. Further, the latest French destroyers and submarines are individually more formidable than the Italian craft. Therefore the supremacy of France, in ships at any rate, is unmistakable, but it should not be forgotten that she has two distinct coastlines to defend and cannot reckon on being able to concentrate her whole fleet in the Mediterranean. In the happily improbable event of a war between the two countries, Italy, no doubt, would attempt to sever the French communications with Africa, preparatory to a descent on Tunis; while the French plan of campaign would be to suppress Italy's sea trade, harry her coasts, and

deny her access to her African colonies. If Italy fought single-handed she would, in all likelihood, get the worst of it, but the struggle would be a desperate one, and the air weapon might play a decisive part.

The hazards of such a war are doubtless appreciated in Rome, yet the Italian nation, animated as it is with a new spirit of self-confidence, seems quite prepared to accept formidable risks if these are necessary to the fulfilment of its aspirations. The Press dwells continually upon the country's super-abundant population, the absence of suitable outlets for emigration, the consequent overcrowding, and the impossibility of maintaining the standard of living to which the masses are entitled. In numerous speeches Signor Mussolini has emphasised the absolute necessity of acquiring new colonies both to relieve the congestion at home and to open up fresh sources of food supply, and it is frequently hinted by the Italian papers that France has more oversea territory than she really needs. Nevertheless, it would be premature to assume that Italy is ready to plunge into war merely for the sake of extending her colonial empire. It would be the most perilous adventure she has ever undertaken, and anything short of complete success would be tantamount to disaster.

Rumours are heard occasionally of a possible alliance between Italy and Spain, arising out of the Treaty of friendship which was negotiated in August 1926. When the King and Queen of Spain visited the Italian Court three years previously and the best ships of the two navies performed escort duty, the journalists of both capitals had much to say of the strategic possibilities of a naval alliance. The Madrid paper *El Sol* observed that Spain and Italy had a common interest in resisting the domination of the Mediterranean by a third Power, and pointed out that each was building up a defensive fleet of cruisers, torpedo vessels, submarines, and aircraft. "The united sea power of both countries," it added, "utilising the

Balearic Islands as a base of operations, could draw an unbreakable line across the Western Mediterranean —that is, right across the French main line of communications with Africa, which becomes ever more important."

This theory is vitiated by the great distance between the coasts of Italy and Spain, which would render effectual co-operation difficult; nor is it at all certain that the forces at their joint disposal would be adequate to form a barricade across the Mediterranean. French flotillas and aircraft based on Bizerta would endanger its eastern flank, while in the west the allied forces would be liable to be overwhelmed by French squadrons striking south from Toulon and north from the Algerian ports. Further, the belief which seems to be held in Rome that France would not venture to move her troopships across the Mediterranean in face of a united Italo-Spanish fleet is probably fallacious. Much graver risks than this would be accepted if the circumstances demanded it, and in any case the French Navy should be capable of affording a reasonable degree of protection to the African transports. It would therefore be imprudent for Italy to count upon the French army being deprived of its legions from overseas.

The Spanish Navy, though by no means insignificant, is hardly strong enough to sway the balance of power in the Mediterranean. It has only two battleships, and these, although well-armed, are so lightly protected that they could not face the French Dreadnoughts. Of greater value for Mediterranean operations would be the six modern cruisers, the twelve fine flotilla leaders and destroyers, and the twenty odd submarines that Spain will have at sea in the course of the next few years. Even so, a union of the Italian and Spanish naval forces, assuming it to be physically possible, would still leave France a margin of superiority, which, in conjunction with the advantage of strategic position, should enable her to

circumvent her adversaries. Thus the hopes of an Italo-Spanish hegemony in the Mediterranean which are sometimes expressed in Rome and echoed in Madrid are seen to rest on a slender foundation.

It is hardly necessary to add that the preservation of peace in those waters is nowhere desired more fervently than in Great Britain, whose interests would be gravely prejudiced if France and Italy were to come to blows. Traffic in the Mediterranean, which is one of our principal trade arteries, would probably be brought to a standstill, since neutral shipping would enter the war zone at its own risk, and that zone would extend from Gibraltar to Port Said. Although each belligerent would certainly be at pains to avoid giving offence to powerful neutrals, accidents would be almost inevitable. We might even find it necessary to declare the Mediterranean out of bounds to our shipping, notwithstanding the serious loss and inconvenience that such a drastic measure would entail. For these and other reasons the progress of Franco-Italian relations is followed with particular interest in this country, where an amicable adjustment of all differences is devoutly hoped for.

Ottoman naval power, which has been in eclipse for many years, and which at its maximum never exercised more than a strictly local influence, may in future become more important, especially if, as a result of the *rapprochement* with Moscow, a renovated Russian Black Sea squadron is made free of the Dardanelles. This, however, is a remote contingency. Turkey, it is true, has proclaimed her intention of building a new fleet, the nucleus of which is to be the ex-German battle cruiser Goeben, now undergoing reconstruction at Constantinople; but sea power to-day is an expensive commodity, as the Angora Treasury will find when it receives quotations for new warships. The Russian Black Sea forces are, for the present, a negligible quantity. They have remained *in statu quo* for several years, and there is no immediate prospect

of a substantial addition to their strength. Moreover, the navies of Greece and Rumania are to some extent a counter-weight in the Near Eastern balance of power.

Turning to Northern waters, the gradual but steady improvement of Germany's naval position is found to be the predominating fact. When the High Sea Fleet, manned by mutinous crews, surrendered for internment after the Armistice, it was freely predicted that Germany had made her final bid for sea power. The splendid navy she had created at heavy cost expressly for the purpose of keeping the sea routes open for her trade in war time and safeguarding her distant possessions proved wholly unequal to its mission. Apart from the submarine campaign, its operations were half-hearted and indecisive. At the beginning of the war the command of the sea was yielded without a blow. While colony after colony was torn from the Fatherland and German trade swept from every ocean, the fleet remained inactive in its harbours, nor did it make any serious attempt to interfere with the blockade which slowly but surely overcame the nation's powers of resistance. To crown all, the sailors chose to mutiny rather than fight a last battle which the German people were taught to believe might have brought them victory at the eleventh hour. The excesses committed by seamen of the fleet during the early days of the revolution so angered the populace that for months afterwards the sight of a naval uniform was liable to provoke disorder.

It was under such discouraging conditions that the task of rebuilding the shattered edifice of sea power was taken in hand. The Versailles Treaty imposed rigid limits on the future strength of the German navy. It was restricted to six old battleships of the pre-Dreadnought era, six light cruisers, and twenty-four torpedo-boats, but not all of these vessels may be kept in commission. Submarines of any description

are prohibited. The total personnel must not exceed 15,000, including a maximum of 1500 officers and warrant officers. Compulsory service is not permitted. Officers have to engage for a minimum term of twenty-five years, petty officers and men for twelve years. Early in 1919 the abolition of the navy as a combatant force was urged by a section of the German Press, which pointed out that as the existing fleet had practically no military value, the money spent in maintaining it was simply thrown away. This drastic proposal was not adopted, and in April of the same year the National Assembly at Weimar formally decided that the navy should be kept up as an essential instrument of defence.

By the *Wehrgesetz* of March, 1921, the military and naval forces were brought under a single organisation controlled by the Ministry of Defence, the officer in charge of the naval section bearing the title of " Chef der Marineleitung." The ships that remained were overhauled, and as many of them placed in commission as funds would permit. The small fleet thus organised was equally divided between the North Sea and the Baltic, though it was recognised that the strategic centre of gravity had shifted to the Baltic. As the semi-official *Marine Rundschau* observed in 1921, " The situation created by the separation of the province of East Prussia draws the fleet to the East, for the flag must be shown to those Germans who have been cut off from the Fatherland, and in relation to whom difficulties may yet arise." As the great dockyard at Kiel was taken over by a limited company soon after the war, Wilhelmshaven is now the only naval establishment, and it is here that all the new vessels of the post-war fleet have been built.

The distribution of the forces in 1927 is as follows :— Baltic Division : battleships Elsass and Hessen, cruisers Nymphe and Berlin, three torpedo-boat half-flotillas, one mine-sweeping half-flotilla. North Sea Division : battleships Schleswig-Holstein (fleet flag-

ship) and Hannover, cruisers Emden and Amazone, three torpedo-boat half-flotillas. Out of commission: battleships Schlesien and Braunschweig, cruiser Thetis. The two divisions are administered as a single command, and at regular intervals they unite for combined training. Cruisers are detached from time to time to show the flag in distant seas, and during the summer of 1926 a battleship squadron made a voyage to the Mediterranean, this being the first occasion since the peace that large German warships had been seen outside their home waters.

Under the impulse of propaganda the Reichstag has recently made generous provision for the navy, a sum of £10,165,000 being allotted to it in the 1926 budget. This was £2,410,000 more than the figure voted in the previous year, the increase being due mainly to new construction, but in part also to the greater number of ships in commission, the heavier bill for coal and oil, and the purchase of guns and torpedoes, the latter item accounting for nearly one-fifth of the extraordinary expenditure. Provision was made for an establishment of 13,161 officers and men, a total only 1839 short of the permitted maximum. The vote for new ships and their armament showed an increase of one-third over that for the preceding year. The first new ship of the post-war navy, the cruiser Emden, was completed in 1925, and three further vessels of this type are now under construction. Several of the battleships having passed the specified age limit, it has been proposed to replace them by new vessels; but as these, according to the Versailles Treaty, must not exceed 10,000 tons, it is difficult to see how they could be endowed with a fighting value commensurate to their cost.

The German navy of to-day, in spite of its modest dimensions and antiquated ships, is without doubt the most formidable of all the minor navies of the world. It enjoys several marked advantages, such as a corps of officers the majority of whom are war

veterans, warrant officers representing the pick of the old Imperial navy, a long-service lower-deck personnel, and potential technical resources second to none. Its proficiency in gunnery, torpedo, and mine tactics is limited only by the quality of the material available. There is no reason to question the *morale* of the personnel. Socialist critics in the Reichstag have declared the navy to be a hotbed of monarchism, basing their charge on the ground that certain officers of avowed anti-republican sentiments have been given high commands in the service. It is averred that recruits are not accepted until they have satisfied the authorities of the "soundness" of their political opinions.

Be that as it may, a certain spirit of democracy is perceptible in the administration of the new navy. There has hitherto been no shortage of recruits, in spite of the rigorous tests of character and physical fitness which they are required to pass. In the old service there was no channel of promotion to commissioned rank from the lower deck. Now, however, any seaman of high school or college education is eligible for such promotion. The only qualification for advancement to the grade of "Anwärter," or cadet, is that the applicant shall have served at least two years as bluejacket or stoker. Proof that this democratic system does not exist merely on paper is to be found in the current German navy lists, which contain the names of a considerable number of men in the "Anwärter" grade. One of the chief causes of the collapse of discipline in the old navy was the unbridgeable gulf that divided the wardroom from the lower deck. That source of weakness has been removed. Students of history know full well that the fighting value of any navy is determined by the quality of its personnel rather than of its ships. Judged by that standard the modern German navy is far more powerful than a mere enumeration of its material resources would suggest.

Allusion is made above to the effect of propaganda on the Reichstag's attitude towards naval expenditure. Since the end of the war Germany has been flooded with books, pamphlets, and Press articles recalling the gallant deeds of the old navy, glossing over its shortcomings, and emphasising the need of adequate sea power in the future. The annual celebration of the Jutland "victory" represents the high-water mark of this propaganda. Jutland is no longer represented as a hard-fought battle in which the honours were pretty evenly divided, but as a resounding victory for the German fleet. As for the navy's failure to raise the blockade and save the colonies, this is ascribed to the baneful influence of the former Chancellor, Herr von Bethmann-Hollweg, who persistently vetoed every proposal for offensive action at sea. But for the timidity of the politicians the battle fleet, it is now declared, would have struck a decisive blow at the outset of the struggle, destroying British naval supremacy and thus securing for Germany an overwhelming victory.

Thanks to constant repetition, this hypothesis is now widely credited by the German people. The semi-official naval organ of the Ministry of Defence, the *Marine Rundschau*, which is frankly nationalist in tone, published a "victory" number on the tenth anniversary of Jutland, which was also celebrated by patriotic demonstrations in every part of the country. "The purpose of all this inspired jubilation seems obvious. It is intended to convince the German people that their future still lies on the water, that they possess in even greater measure than their British cousins the qualities which make for maritime ascendancy, and that with a powerful fleet once more in being they may look forward to regaining all, and more than all, that was lost through defeat." *

A campaign is already on foot to secure the revision, if not the total abolition, of the naval clauses in the

* *The Atlantic Monthly*, Nov. 1926.

Peace Treaty. It must be conceded that Germany has a strong claim to greater liberty of action with regard to her naval defences. In spite of the loss of her colonies, her oversea interests are extensive and important. Her merchant marine, which was practically destroyed by the war, has already regained 60 per cent. of its pre-war magnitude, and in ships of modern construction—that is, of the most efficient type—it is second only to the British commercial fleet. Her foreign trade exhibits a progressive increase, and German goods are once more being sought in every oversea market. It is therefore argued with a show of justice that the miniature navy which the Treaty permits her to retain is wholly inadequate for her needs. What appears to rankle most are the restrictions on the tonnage of such new warships as she may build and the embargo on submarines. German writers point out that whereas their country, with its great volume of sea trade and long stretch of coastline, is forbidden to possess a single man-of-war of real fighting power, other States, whose maritime importance is negligible, are free to acquire naval craft of the most powerful type. Poland, Finland, and Latvia, for example, have all purchased submarines recently, while Germany is not allowed to have a single boat. The movement to cancel the Versailles naval rules has already assumed greater dimensions than seems to be realised abroad.

It is only a question of time before Germany brings this question up in concrete form at Geneva. What the British response would be to a demand by Germany for freedom to reconstruct her fleet within the framework of the Washington Treaty, instead of the Versailles pact, can only be conjectured. The prospect of a new German U-boat flotilla coming into existence is not one that the British people could be expected to view with equanimity. Probably they would insist on the submarine ban being maintained, in which case the issue would be determined by the

attitude of the other signatories to the Versailles Treaty. This is one of the inevitable problems of the future which call for earnest consideration before they actually arise.

Germany meanwhile bases her claim for a larger allotment of sea power partly on her unsatisfactory position in the Baltic, where she professes to view the naval armaments of Russia with misgiving. The actual condition of the Russian Baltic fleet to-day is the subject of conflicting reports. All that can be said with reasonable assurance is that it has become slightly more formidable in recent years, both as to *personnel* and material. On paper it is superior to the German fleet owing to the presence of two, if not three, Dreadnought battleships, of which vessels Germany has none. It also contains a number of destroyers surpassing the best German boats in tonnage and armament, besides a flotilla of submarines. The "Red" fleet is occasionally seen cruising in the Baltic, and in the summer of 1925 it steamed almost as far west as Kiel Bay. Manned by an efficient *personnel* and under competent leadership this fleet should have no difficulty in dominating the Baltic. From all accounts, however, the standard of discipline and efficiency, though considerably improved since the early days of the revolution, is still below that of other navies, and training is severely handicapped by the lack of up-to-date equipment.

It is doubtful whether any marked advance has been made in gunnery or torpedo practice during the past ten years. Hence the Soviet fleet, notwithstanding its numerical superiority, could scarcely hope to prevail against the small but well-found and highly-trained German squadron. Apparently the Soviet industrial machine is still in an imperfect state, for the efforts made to recondition certain battleships and cruisers have hitherto been unsuccessful. A case in point is that of the cruiser Sovnarkom (ex-Svietlana), which after lying unfinished for several

years was prepared for service at one of the Leningrad yards in 1924–26. On her first trial trip she broke down so completely that she has since been paid off as ineffective. According to an official British return, the Soviet navy now comprises the following ships: four Dreadnoughts, each of 23,000 tons and 23 knots speed, armed with twelve 12-in. guns; five cruisers, including two new vessels of 29½ knots, and two more under construction; one aircraft-carrier; seventy-five destroyers; six torpedo-boats, and nineteen submarines, with three more building. Unofficial information is to the effect that only two of the Dreadnoughts, three cruisers, about twenty destroyers and twelve submarines are in a seaworthy condition, all the others having been ruined by neglect or incompetent handling. A building programme of four cruisers, ten destroyers, and fifteen submarines was adopted in 1925, but so far only two or three submarines have been laid down, and until the national industries are reorganised it will not be possible to build and fit out any of the larger vessels.

It is worthy of note that Soviet naval power is taken more seriously by neighbouring States—which are presumably in a better position to judge—than by countries at a greater distance. Poland is doing her utmost to build up a formidable coast-defence fleet, which includes submarines constructed in France; Finland and Latvia are maintaining naval establishments to the full extent of their limited resources. The small but very efficient Swedish navy, of which the greater part is kept in full commission, might be trusted even single-handed to hold its own against the Russian fleet. It is well provided with torpedo craft and submarines.

The naval policy of the Netherlands is chiefly influenced by considerations of colonial defence. Were it not for the lucrative trade with her East Indian possessions Holland would be unable to support her population in the home country, which is sadly

deficient in natural resources. Therefore, as a Dutch naval officer wrote some years ago, "the loss of our Indian colonies would be a veritable catastrophe; it would wreck our economic life and reduce us to a mere appanage of the German Empire. The retention of the East Indies is thus unquestionably one of the main foundations, not merely of Holland's prosperity, but of her existence as an independent State." It is a remarkable circumstance that a small European State, with an area of only 12,600 square miles and a population of barely seven millions, should have remained for so long in undisturbed tenure of a vast colonial empire representing one of the richest domains in the world. Two-thirds of the East Indian archipelago is owned by Holland, her possessions embracing an area of 783,000 square miles, inhabited by a population nearly eight times as large as that of the mother-country.

Irrespective of their immense natural wealth, these islands, notably Sumatra and Java, are of great strategic importance, owing to their situation at the gateway of the Pacific, on the main shipping route from Europe to East Asia, where they command the eastward approaches to that ocean. Consequently a transfer of ownership would profoundly modify the balance of power in the Pacific, and in this fact we find the explanation of their long immunity from interference. Britain, for instance, could not afford to let Java or Sumatra change hands, either forcibly or by other means. Holland is therefore confident that if she ever became involved in war with a great Power she would not be left to fight alone; but at the same time the possession of these colonies increases her danger of being drawn into such a struggle, because the scantiness of their defences might tempt a belligerent to seize them. The task of the East Indian squadron in war would be to hold the invader at bay until help arrived from the powerful ally whose intervention is taken for granted. Holland, for

obvious reasons, is deeply interested in the Singapore base, and the suspension of this scheme by the Labour Government in 1924 was sharply criticised by the Dutch Press.

It is evident that Dutch residents in the Far East are concerned about the future, fearing as they do that the stress of economic necessity will compel Japan to extend her boundaries and perhaps encroach upon the Malayan archipelago, though it is not very probable that Japan would embark on a policy which would almost certainly bring her into conflict with both the British Empire and the United States. This for the reason that with Celebes or Dutch Borneo in Japanese possession America's hold on the Philippines would become precarious to a degree, while if Java or Sumatra came under the sway of Japan the British base at Singapore would be neutralised and a real menace to Australia might then develop. The Dutch naval programme of 1922 aimed at the creation of a powerful fleet of light surface ships, submarines, and aircraft for the defence of the East Indies, but this measure was rejected by Parliament. The colonial squadron now consists of two coast-defence battleships, the powerful cruisers Java and Sumatra, destroyer and submarine flotillas and minelayers. As all the best ships are serving on this station the Dutch navy in home waters is relatively insignificant.

In South America there are signs of naval activity, but nothing definite had resulted at the moment of writing. In 1926 the Argentine Parliament voted a large sum for purchasing new war vessels, including submarines, which are not yet represented in the fleet. The two Dreadnoughts, Rivadavia and Moreno, were reconditioned in the United States, and four destroyers are to be modernised. Chile also contemplates the reinforcement of her fleet, probably by cruisers to be built in England. Political difficulties continue to delay the expansion of the Brazilian navy. Judging from experience, however, the first

move in this direction by one of the three leading States in South America will evoke corresponding action from the others, since for many years past the local balance of power has been fairly well maintained.

New light was shed upon the naval ambitions and policies of the secondary maritime Powers at the Rome Conference of February 1924, which had been summoned by the League of Nations with a view to giving the Washington Treaty rules a universal application. Although this aim was not achieved, the proceedings served a useful purpose by inducing the Powers concerned to lay their naval cards on the table. It cannot be said that the proposals submitted by the League were of a practical nature or likely to command assent. Briefly, they were that the Powers in question should agree to limit their naval armaments to the material actually in their possession or under construction on Nov. 12, 1921—the date on which the Washington Conference had assembled. Under this scheme the tonnage allowed to the various nations would have been as follows: Argentine, 81,000 tons; Brazil, 45,000; Chile, 35,000; Denmark, 13,000; Greece, 36,000; Holland, 26,000; Norway, 16,000; Spain, 81,000; Sweden, 62,000.

Greece, Norway, and Sweden were the only Powers that signified their readiness to consider the proposal, and then only on certain conditions: for example, Greece stipulated for complete reciprocity on the part of Turkey, reserving the right to increase her fleet if her Ottoman neighbour departed from the agreed ratio. The Scandinavian Powers declined to commit themselves to any hard and fast scheme of limitation until the future naval plans of Germany and Russia were known. Brazil and Chile demanded tonnage equality with the Argentine, and Spain claimed a large increase in her allotment of ships on the ground that, as an important European Power, it would not consort with her dignity to be placed on a level with the South American Republics.

Russia was also represented at the Conference, and it was her delegate, M. Behrens, who was responsible for the length of the proceedings. The League had suggested 110,000 tons of warships for Russia, but M. Behrens demanded 490,000 tons, pointing out that even this figure was 50,000 tons less than the fleet which Russia possessed during the war. Eventually he agreed to reduce the total to 280,000 tons, provided that the following conditions were observed: "(1) That the Council of the League of Nations is replaced in the draft by another organisation. (2) That the Bosphorus and the Dardanelles are closed in accordance with the proposal which Russia made at the Lausanne Conference. (3) That vessels of war belonging to non-riparian States of the Baltic are forbidden access to the Baltic by the Sound and the Belt. (4) That the Straits of Korea are disarmed. (5) That the vessels of war at present retained at Bizerta are restored to the Soviet Union." Needless to say, the Conference had no authority to discuss these conditions. The impression left by the proceedings at Rome was that universal naval disarmament on the ratio system was an unattainable ideal. There seems no doubt that the staggering cost of present-day naval construction is a far more effective deterrent to competition among the smaller Powers than diplomatic negotiations are likely to prove.

CHAPTER XIV

DISARMAMENT: THE FUTURE RESTRICTION OF NAVIES

The substantial measure of success that attended the Washington Conference naturally encouraged further efforts in the same direction. Because the competitive building of capital ships had been checked by mutual agreement, it was assumed, a little too readily perhaps, that all armaments were equally susceptible to restriction and regulation by international treaty. This idea was undoubtedly fostered by imperfect knowledge of what had really happened at Washington. For obvious reasons the authors of the Conference were more anxious to stress its positive results than to advertise the points upon which no agreement had been reached. The fact is, however, that while much was accomplished, the underlying purpose was not. That purpose was absolutely to stabilise the relative strength of the five principal navies over a long term of years. How far it fell short of attainment may be judged by the continual and somewhat heated discussions as to the relative status of navies which have been going on ever since the Conference, particularly in the United States.

If the battleship and the aircraft-carrier were universally accepted as the key factors of sea power, the limitation of these types would have tended to maintain the balance of strength; but they are not. The very fact that these types are restricted has automatically enhanced the combatant value of smaller craft, to the multiplication of which no limit is set. It is as though an international assembly summoned

with the object of reducing land forces to a graduated scale of strength succeeded only in establishing ratios for heavy artillery and cavalry, leaving each country free to expand its other military forces at will. America, as the prime mover in the sphere of naval disarmament, desired above all things to secure equality of power with the British Empire and a considerable margin over Japan. To gain this two-fold object she was prepared to make a considerable sacrifice by cancelling material which, if completed, would have given her a temporary supremacy in battleships, even though it left her inferior to both the British Empire and Japan in other, and perhaps equally essential, elements of naval power. We shall do the American statesmen of that period no injustice by concluding that they hoped to make a much better bargain than actually resulted.

In these circumstances it is not surprising that the United States should be foremost in urging a new conference to complete the work that was left unfinished at Washington. The practical difficulties of naval limitation in the full sense of the phrase are recognised, without being considered insurmountable. There is, however, a mistaken tendency to treat the problem as a triangular one, concerning only the United States, Great Britain, and Japan. All would be plain sailing, we are assured, if Britain and Japan would agree to extend the five-five-three ratio to auxiliary craft as well as to battleships. From the American point of view this would be, of course, a most satisfactory arrangement, and, for the matter of that, hardly less acceptable to Britain if America were regarded as the principal rival at sea.

The difficulty is that London and Washington view current naval problems from different angles. To the United States, for instance, the balance of power in the Mediterranean is a matter of almost complete indifference, whereas to us it is a question of vital moment. In the Far East, it is true, there is

a certain community of naval interests, though it is by no means certain that the strategic conditions which are responsible for the present distribution of the British Fleet, with its spearhead pointing eastward, will continue indefinitely. In the course of the next ten years developments may occur in the Mediterranean, the North Sea, or the Baltic, or in all three areas, of a nature that would compel us to abandon our current strategic policy and concentrate our forces anew in Europe.

America's chief concern is to possess a fleet which shall be capable of neutralising Japanese naval power and so ensuring the integrity of her Pacific possessions. There are, no doubt, people in the United States who sincerely believe in the possibility of war with Great Britain, and are therefore anxious that their navy should be in all respects equal, if not superior, to our own. As we have seen, this belief is shared even by certain American naval officers, but it is certainly not reflected in the policy of the Washington administration. On the whole, it seems most probable that the American demand for naval equality is prompted mainly by a desire to uphold the *status quo* in the Pacific; in other words, although the British navy is officially represented as the standard of power which must be achieved, America's true object is to maintain a two-fifths superiority over Japan, because Japan is regarded as the most probable antagonist of the future. With that aim secured, America's cardinal problem of naval defence would be within sight of solution, since only in the Western Pacific is she really vulnerable.

Very different is the position of Great Britain. Although our interests in Eastern waters are considerably more extensive than those of the United States, elsewhere we have commitments of even greater importance which also call for naval defence. In time of war we should be liable to attack in the Mediterranean, the Channel, and the Atlantic, to say

nothing of the Pacific. Manifestly, therefore, a fleet that sufficed for American requirements would be inadequate for our needs. This self-evident fact explains the cautious attitude of the British Government towards American proposals for extending the fifty-fifty ratio to every type of warship. All who study the progress of international affairs know that the naval issue has in recent years come to play a very important part in Anglo-American relations. An American writer said recently that, "following the settlement of the Irish question, which had been for generations the root cause of trouble between ourselves and the British, this naval polemic has cropped up in the nick of time to prevent us from becoming too friendly."

Britain could no doubt purchase a larger share of America's goodwill by agreeing to establish an all-round equality in warship tonnage. The question is, however, whether we should be justified in accepting an artificial standard of defence that bore no relation to our actual requirements. The risks that it would entail might be faced if we could rely on America coming to our aid in an emergency, but of that we have, of course, no guarantee. In plain terms, what we are invited to do is so to reduce our strength in cruisers and anti-submarine craft as to render problematical the effectual protection of our seaborne trade in war. Yet upon the safety of that trade our very existence depends. Again, it is evident that any extension of the original Treaty of limitation must be binding on all the signatory Powers, not merely on two or three. Britain could not be expected to restrict the number of her anti-submarine craft unless other Powers agreed to restrict the number of their submarines. In this connection France proposes to maintain a submarine fleet of 90,000 tons, which she declares to be the minimum consistent with her requirements. This being so, Great Britain, as the Power which has most to dread from the underwater

menace, should consider well before accepting any hard-and-fast allotment of anti-submarine tonnage. If she did it would have to be on a liberal scale, since war experience showed that many destroyers are needed to neutralise one hostile submarine.

The way might be cleared for further progress in naval disarmament if the United States, without yielding the principle of parity with Great Britain, invited the latter to suggest tonnage ratios for auxiliary types. It would then be for the United States to decide whether or not to build up to the full allowance. Of cruisers not more than ten years old from date of completion the British Empire now has thirty-nine built and building and the United States fifteen. In view of the great volume of floating trade to be protected it is practically certain that Britain would not accept less than fifty cruisers, and even this total is rather less than the minimum which the Admiralty has recommended. Taking fifty as the basis, however, Britain would have a further eleven ships to build, while the United States, if it wished to achieve equality, would have to construct no less than thirty-five new ships. The difficulty is that if this ratio were established Britain would certainly build up to it, whereas the United States, judging from past experience, probably would not. In that case the disparity in cruiser strength would remain as before, and American naval interests would doubtless continue to agitate for a revision of the ratio on the grounds that it was excessive and unfair to their country.

It has been unofficially suggested in America that the cruiser ratio, as between Britain and the United States, might be fixed at 200,000 tons, equivalent to twenty ships of the modern ocean-going type. That number might suffice for American needs, but it is demonstrably insufficient for our own. Nor must Japan be left out of the calculation. She has twenty-five modern cruisers built and building, or ten more

than the United States; so that were the five-five-three ratio extended to this type she would be called upon to scrap many of her existing ships. In view of the importance she attaches to cruisers as a means of safeguarding her indispensable oversea commerce it is highly improbable that she would agree to any such proposal. The American suggestion of 200,000 tons as the maximum cruiser allotment means that Japan would be allowed 120,000 tons, or, say, twelve ships. Is it likely that she would accept this figure?

In the Hughes plan submitted at the Washington Conference cruisers and destroyers were bracketed together as surface auxiliary ships, 450,000 tons being proposed for the United States and the British Empire, respectively, and 270,000 tons for Japan. These totals, which were not unreasonable, may yet offer a basis for negotiation—always provided that submarines are brought within the scope of limitation. On the other hand, if the Powers that specially favour submarines decline to restrict their undersea fleets or, alternatively, insist on a very large allowance of such craft, the obstacle might still be overcome by taking total tonnage as the basic standard of naval strength and assigning ratios on that principle. This method has always been advocated by France, though it has hitherto been rejected by the three leading naval Powers, who prefer the adoption of ratios for each class of tonnage. France, however, was able to carry her point during the discussions at Geneva in 1926, the total tonnage system of computation being recommended in the majority report published in July of that year.

The obvious objection to this system is that it would leave any country free to invest the whole of its tonnage allowance in submarines, thus compelling neighbouring States to devote all their energy to the production of anti-submarine vessels. The fact is, however, that no Power is in the least likely to trust its naval defence exclusively to the submarine arm.

From the speeches of her delegates at the Washington Conference it might have been supposed that France had entirely lost faith in surface ships and would henceforth build nothing but submarines. Nevertheless, an analysis of her post-Conference building programme shows the submarines to be outnumbered by surface vessels. Since 1921 she has authorised the construction of sixty-six cruisers, flotilla leaders, and destroyers, and sixty-two submarines. Within the same period Italy, which also favours limitation by total tonnage rather than by individual classes, has legislated for twenty-nine cruisers and destroyers and twenty submarines.

These figures are very significant, showing as they do that the two Powers which have been foremost in advancing the claims of the submarine still believe surface ships to be indispensable. If their building programmes were translated into terms of tonnage, the percentage of submarine construction would be found to be comparatively low. For this reason it is to be hoped that the Continental plan of naval restriction by aggregate tonnage will not be rejected by Britain and the United States merely on hypothetical grounds which experience has proved to be fallacious.

A careful survey of the present situation warrants the conclusion that further definite progress can be made towards the reduction of naval armaments if the leading Powers sincerely wish for it. Resistance comes almost entirely from the professional interests concerned, who by training and tradition are antipathetic to the whole principle of disarmament. Glancing back over the past five years it will be found that the campaign against the restriction of war fleets has been organised by naval officers and their civilian associates. In Great Britain we have had members of the Admiralty publicly insisting on the maintenance of a supremacy in cruisers, in pointed contrast to our official policy at the Washington Conference. These speeches, which have received much more attention abroad

than at home, are particularly regrettable, because it has always been clear that while in any future discussions on naval limitation the British case for a large ratio of cruiser tonnage would be suitably emphasised, it would not necessarily exclude the establishment of a common cruiser ratio for the British Empire and the United States. As it is, one of the most promising avenues of approach to a very difficult problem has been temporarily blocked by verbal indiscretions.

In the United States the naval element has been equally active in raising difficulties. There the method has been to cast suspicion on the good faith of foreign Powers, and at the same time to divert attention from the main issue by introducing extraneous matters. Thus we find one of the ablest of American naval critics arguing, first, that merchantmen must be included in any future scheme of armament reduction, and, secondly, that the British islands of Jamaica, Bermuda, and Trinidad should be abandoned as naval bases on the ground that they constitute a menace to the United States. How far this propaganda has influenced American public opinion cannot be determined.

It appears to have had little effect on the Washington Cabinet. The attitude of President Coolidge was outlined in an official statement published on Sept. 7, 1926. From this it appeared that the President approved the limitation of armaments as a means of reducing taxation and preventing the growth of bellicose sentiment, and was determined to avoid giving any Power a pretext for instituting a competition in armaments with the United States. Not only has the President hitherto refused to sanction the building of American auxiliary craft on the basis of the five-five-three ratio established at the Washington Conference, but it was expressly stated that even should this ratio or any other scheme of limitation be extended by means of a new Treaty to naval auxiliary craft as well

as to capital ships, the President would still be disposed to keep American strength in each class of vessel somewhat below the stipulated standard in order to avoid the least semblance of a competitive spirit.

Finally, to make his position clear beyond possibility of misconception, the President caused it to be known that he had laid down a rule to the effect that in naval types other than those regulated by Treaty the United States shall build solely with a view to its own requirements of defence, and not with the object of keeping level with Great Britain or of maintaining a two-fifths superiority over Japan. It would appear, therefore, that the United States is prepared to make greater sacrifices in the cause of disarmament than the propaganda of its navalists had led the world to believe. True, the President, less than four months after making the above declaration, gave his approval to a bill authorising the construction of ten new cruisers. According to Washington correspondents, however, this measure was introduced less with the object of strengthening the fleet than as a warning to other Powers that if naval limitation were further delayed the United States would pursue an independent line of action. Moreover, the new programme would give the American Government something to bargain with in the event of a new conference being held.

Japan is not only willing but anxious that another attempt should be made to check the development of armaments at sea. The financial burden imposed by her present combatant forces is as much as she can bear, and as the existing fleet is considered adequate for the defensive rôle which it is designed to fill, it is very much to her interest that the prevailing standard of naval strength should not be disturbed. Her representatives at the Geneva discussions in 1926 displayed a most accommodating spirit, and did everything practicable to promote agreement on fundamental issues: more than this, when it was found impossible to reconcile the Continental views

on naval disarmament with those held by Great Britain, the United States, and Japan, they suggested that the three latter Powers should concert measures for the reciprocal reduction of their fleets, without reference to other parties. This proposal, it is true, did not commend itself to either London or Washington, but the fact that it was made is proof of Japan's earnest desire to avoid a new competition in armaments at sea.

The Japanese Press has recently been urging that the abandonment of the new Singapore base should be made a condition precedent to the settlement of ratios for auxiliary war vessels, but there is no evidence that the Tokyo Government would insist on such a concession. The essential fact is that Japan is now strongly opposed to competitive shipbuilding and may be trusted to give loyal support to any reasonable scheme for enlarging the scope of the Washington Treaty.

The attitude of France is unfortunately less encouraging. In the spring of 1925, when President Coolidge was reported to be on the point of suggesting a new conference, it was intimated at the Quai d'Orsay that France regarded naval disarmament as an accomplished fact so far as she was concerned. While she would be willing to be represented at a new conference, it was added, she would attend with the feeling that the proceedings had little interest for her. Very shortly after this announcement a change of Government occurred, restoring M. Briand to power. He at once caused it to be known that the American move for further naval restriction would receive no support from him. As principal French delegate to the first conference he had been unfairly charged with betraying his country's interests, and upon his return to Paris he had to endure a great deal of abuse on this score. As a consequence he has since been extremely reluctant to reopen the subject of naval limitation. His speeches during the Parliamentary debates on

the Treaty showed him to be a firm opponent of any restriction on submarine or other non-capital tonnage. Other French statesmen of eminence have expressed the same view. It is therefore no injustice to France to describe her as the stumbling-block to disarmament at sea.

At the same time it is possible that the consciousness of her growing maritime strength, due to the systematic progress of the five-year building plan, will incline her to lend a more favourable ear to future proposals. At Washington she felt herself to be caught at a disadvantage, with a navy heavily depleted by war casualties and enforced neglect, and her finances in no condition to support the measure of sea power to which she was entitled. Since she could not, for reasons of policy, afford to reject the Washington proposals, she was compelled to accept a status that accorded neither with her dignity nor her actual defence requirements. To-day, however, she occupies a different position. Her naval strength has already been considerably augmented, and when the current programme matures she will possess a fleet which ought at least to render her secure in the Mediterranean. She might thus be prepared to consider a ratio of auxiliary tonnage based on the establishment which is expected to be available in 1931. That she would accept anything less than this is doubtful.

It must be remembered that France, although primarily interested in the Mediterranean, can never be indifferent to the balance of power in Northern waters. Any definite expansion of German sea power would be to her a matter of vital concern. Therefore the inclusion of Germany in a future limitation pact is held by French critics to be indispensable. Great Britain has an equal interest in this question, for it is hardly to be supposed that the naval inhibitions of the Versailles Treaty can be maintained indefinitely.

Italy, as we have seen, was well content with the

Washington agreement, which enhanced her prestige by formally recognising her maritime equality with France. It is improbable that she would oppose an extension of the agreement with the object of rationing auxiliary craft, provided she were not asked to accept a lower ratio than France. On the French side further protests would doubtless be raised against the assumption of Italian equality. Nevertheless, the allotment of a common ratio of auxiliary tonnage would not necessarily involve the actual maintenance of a common standard of strength. In this connection a comparison of their respective shipbuilding operations since the Washington Conference is instructive. France has built and authorised nine cruisers, fifty-seven destroyers, and sixty-two submarines, a total of 128 units. The Italian programme for the same period embraces five cruisers, twenty-four destroyers and twenty submarines, a total of forty-nine units. These figures show that Italy has hitherto made no attempt to translate into practice the theory of naval parity with France, even if she were financially capable of doing so. Therefore it is difficult to see how French interests would be prejudiced by acceptance of a fifty-fifty standard of auxiliary tonnage with Italy.

Finally, let us consider the subject of naval limitation from the British point of view. It is commonly supposed that Britain, as the premier naval Power—in fact if no longer in name—would stand to lose most by the imposition of further restrictions on the development of naval strength. The arguments supporting this thesis have been fully presented in earlier chapters, and it is now time to examine the other side of the case. In the first place we must recognise that the world's estimate of sea power has been profoundly modified as a result of the war. Improved means of navigation have given a literal interpretation to the adage that the sea unites rather than divides. The wonderful progress that aviation has made and the almost

boundless possibilities which this method of transit opens up does not alter the fact that the sea is and will long remain the principal highway of international traffic. Because the freedom of the sea meant more to us than to any other country we have always striven to maintain naval supremacy, and until a comparatively late period our claim to rule the waves, if never formally conceded, was tacitly accepted by the world at large. True, our primacy afloat was impeached at times by individual nations, but at no time did we have to meet a concerted challenge.

Throughout the nineteenth century we were able to keep well ahead of all rivals: first, because of our superior wealth and other material resources; secondly, because we alone amongst the nations had both the will and the means to maintain the strongest navy; thirdly, because we never abused the tremendous power that naval supremacy placed in our hands. To-day, however, the conditions are different. The maritime interests of other great States have expanded, and there is consequently a growing disinclination to admit the claim of any one Power to control the seas. This tendency finds expression in the American demand for naval equality with the British Empire. It is useless to disguise the fact that we are no longer in an economic position to maintain our lead in the face of determined competition. Naval strength, in its material elements at least, is a question of money. Therefore, since we have ceased to be the wealthiest Power, our primacy afloat is henceforth liable to be challenged, and successfully challenged, by a rival with the longer purse.

The United States, for example, has already demanded and obtained parity with us in battleships and aircraft-carriers. If at any time it should decide to apply the same standard to cruisers and other craft, or, for that matter, definitely to out-build us in every class of combatant tonnage, it could do so without a doubt. And in view of the trend of American policy

in recent years the possibility of such a decision being taken cannot be ruled out. Nothing is more likely to strengthen the hands of the big-Navy group in America than the resistance of foreign Powers to the further limitation of naval armaments. A great deal of capital has already been made out of the British Admiralty's public claim to supremacy in cruisers.

Clearly, therefore, our true interest lies in promoting the cause of naval restriction by every means at our command. For reasons which have been expounded, and which are indeed self-evident, we can no longer hope to retain absolute supremacy at sea. That being so, it is obviously better to have the entire naval position stabilised by international agreement—provided that can be done without prohibitive sacrifices on our part—than to enter upon a new era of competitive shipbuilding in which we are virtually certain to be out-distanced sooner or later.

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